THE ECKERT TAPES
On ENIAC's 60th anniversary, a newly released interview with co-inventor J. Presper Eckert debunks some myths. PAGE 18

KNOWLEDGE CARNIVORES
In the Age of Big Information, winners will capitalize on the data deluge, says Thornton A. May. PAGE 21

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Navigating Global IT

SPECIAL REPORT GLOBALIZATION

From chaotic streets in India to regulatory gotchas in Europe, going global is full of surprises. Here's a guide to the governance, legal, personnel and cultural issues you'll face.

STORIES BEGIN ON PAGE 23

ONLINE
Test your knowledge of world business practices and cultures with our Cultural IQ quiz

New York Faces Federal Suit Over Voter Accessibility Law

DOJ says state lags in complying with IT mandates

BY MARC L. SONGINI

The state of New York is being threatened with a federal lawsuit for failing to comply with the Help America Vote Act, which requires actions such as the development of statewide voter-registration databases and the installation of e-voting systems or other voting machines that are handicapped-accessible.

The legal threat came in a letter sent to state officials last month by Assistant U.S. Attorney General Wan Kim. In the letter, Kim said that New York is "further behind" in HAVA compliance than any other state and that Attorney General

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INSIDE
The feds plan to develop standards for regional health care data exchanges. Page 12

NEWSPAPER

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Security Execs Push for Broader Use of Metrics

Say measuring risks and evaluating controls helps prioritize spending

BY JAIKUMAR VIJAYAN
SAN JOSE

Measuring IT security risks and the effectiveness of corporate defenses can be a difficult and somewhat imprecise task. But that shouldn't be an excuse for not trying to gather such metrics, IT managers said at the annual RSA Conference here last week.

Security professionals have long advocated that companies use both quantitative and qualitative metrics to get a more granular view of IT risks and the controls needed to mitigate them. At RSA Conference 2006, many attendees said the topic is taking on increased importance because of regulatory requirements that are pressuring corporate executives to demonstrate due diligence on protecting their data assets.

"Start using metrics to make security decisions, and don't get too hung up on the quality of the data, and don't get too hung up on complicated methodologies," advised John Meakin, group head of information security at London-based Standard Chartered Bank. "Just start doing it."

> I would say one of the worst things I could do is spend too much money on security.
>
> [illegible]

Meakin said that using metrics to prioritize security threats and vulnerabilities according to the risks they pose to IT assets can help security managers target their resources more effectively — and determine whether they are putting the appropriate amount of money into security efforts.

For instance, Standard Chartered has been moving

Security, page 16

A Company Tracking 9 Million Container Moves a Year.
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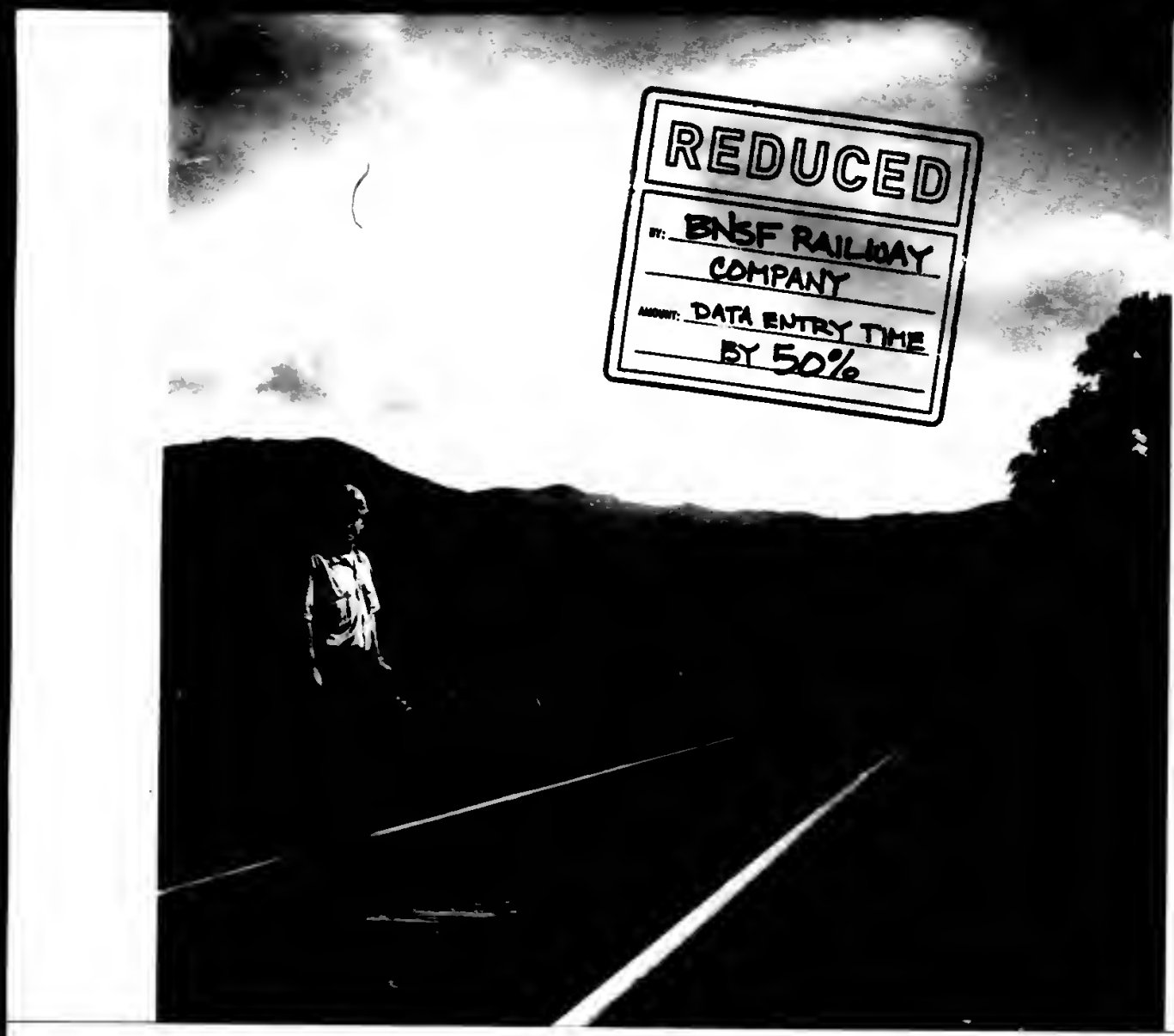

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NEWS

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8 Female CIOs are few and far between in California, according to a study of 200 companies in the state.

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14 Service outages prompt Salesforce.com to develop a Web site for updating users on the status of its hosted CRM apps.

16 A lack of support options is discouraging some IT execs from adopting open-source software, conference panelists say.

18 Q&A: ENIAC designer J. Presper Eckert debunks some myths about the first all-electronic computer in interviews taped in 1989.

ONLINE

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OPINIONS

10 On the Mark: Mark Hall says it's a given that you can't avoid operational risks in business or within IT itself. But he reports on a suite of tools designed to help users identify, mitigate and potentially avoid the risks. He also describes a tool that lets you monitor for Border Gateway Protocol injection attacks and tells of the birth of the Infrastructure Management Institute in Kentucky.

20 Don Tennant contends that understanding the difference between being a truly global operation and being a company with a collection of offices in different countries is a hallmark of today's IT leader.

20 David Moschella ponders the Internet's power as a source of truth that has no other outlet following recent debates on information access, responsibility and self-censorship.

21 Thornton A. May says we are entering the Age of Big Information, when we can finally manage the deluge of data that's been washing over us.

50 Frankly Speaking: Frank Hayes recalls the granddaddy of all IT projects, the creation of ENIAC 60 years ago this month. And he muses on the one clear lesson from it: J. Presper Eckert and his team understood exactly what ENIAC was intended for, and that clarity helped ensure success.

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Navigating Global IT

Editor's note: Going global is full of surprises, even for savvy IT executives. This special report offers IT leaders at multinational companies a guide to the governance, legal, personnel and cultural issues they'll face. **Package begins on page 23.**

24 Balancing Act. As U.S. companies aspire to become global enterprises, IT executives must standardize processes. Here's a look at three approaches for creating equilibrium.

26 Culture Clash. We examine some of the misunderstandings that can arise when people from different cultures come together on a project team and offer suggestions about how to avoid clashes. Plus, tips for doing business in Hong Kong, India, Russia and Taiwan.

32 Global Gotchas. Learn how to avoid hidden traps in international laws covering areas like labor relations, taxation and more.

36 Casting Call. Finding people to manage IT outposts abroad can require a global search, say IT execs like Alan Boehme of Juniper Networks. Plus, the challenges of recruiting in Ireland and India.

38 Blind Spots. Global companies are striving to improve supply chain visibility.

42 Safety Zone. Learn how companies with facilities throughout the world plan for business continuity and disaster recovery.

44 Opinion: CIOs (Should) Rule. On the global scene, a good CIO is a far better asset than a good CFO, says columnist Mark Hall.

The following stories can be found online at computerworld.com/global.

COUNTRY CHEAT SHEETS. From travel to etiquette, we've collected tips for doing business in seven key parts of the world.

CULTURAL IQ QUIZ. Think you already know world business practices and cultures inside and out? Test your knowledge with this quiz from Terri Morrison, co-author of *Kiss, Bow or Shake Hands: How to Do Business in More Than Sixty Countries.*

DATA POINTS. These downloadable PowerPoint slides offer statistics on global markets, leadership development and more.

WEBCAST. When data travels across borders, companies can get tripped up by local laws designed to protect the privacy of personal data. Listen to this webcast to learn more about such restrictions. Free with registration.

OPINION. CIOs and other business strategists need to plan for the long term, including the possibility that the company's global expansion will be a runaway success, says globalization expert Satish Mariputi.

AT DEADLINE

Bill Aims to Restrict Web Server Sites

Rep. Christopher Smith (R-N.J.) last week introduced legislation in Congress that would ban U.S. Internet companies from locating Web servers inside "Internet-restricting" countries, such as China and Vietnam. The bill calls for prison sentences for those who don't comply with the proposed law. The Global Online Freedom Act would also prohibit U.S. search-engine companies from altering the results of searches in those countries.

HP Revenue Up 6%, Beats Projections

Hewlett-Packard Co. reported that revenue increased by 6% in its first quarter, beating expectations of analysts surveyed by Thomson First Call by more than $150 million.

HP BY THE NUMBERS

	REVENUE	PROFIT
Q1 '06	$22.7B	$1.2B
Q1 '05	$21.5B	$943M

IBM to Ship Slimmer Tivoli Identity Tool

IBM next week will start shipping a slimmed-down version of its Tivoli Identity Manager software designed for small and midsize businesses. The software is typically used by very large companies to manage usernames and passwords and audit user activity. The new Express version limits use of the software to 5,000 users and will be priced at $24 per user, IBM said.

Short Takes

DELL INC. said it topped revenue and earnings expectations in its fourth quarter, helped by strong sales of enterprise products and services. Revenue totaled $15.2 billion in the quarter, which ended Feb. 3. . . . The U.S. DEPARTMENT OF THE TREASURY's inspector general has issued a report saying that the agency should consider other options before awarding a controversial 10-year, $1 billion telecommunications contract.

IBM Ups Data Management Ante to Match IT Trends

Will boost software R&D spending, add consultants

BY PATRICK THIBODEAU
NEW YORK

IBM last week announced a multipronged data management initiative that has been driven by several trends: hardware that's getting increasingly supercomputerlike, improved software capabilities for accessing data, pressure from data-intensive technologies such as RFID, and an overall desire by businesses to improve their use of information.

At a press briefing here, IBM said it plans to spend $1 billion over the next three years to expand its development of data management software. The company will also boost the number of workers in its services group who are dedicated to data management work by 65% from 15,000 now to about 25,000.

In addition, IBM is working to more closely align its middleware products and consulting offerings. At the briefing, it unveiled a set of six "solution portfolios" related to managing data, as well as upcoming data integration software called WebSphere Information Server.

Steve Mills, senior vice president and group executive for software at IBM, said he expects to see a rapid increase in demand for data management software and services.

"I think we're at a juncture here for this thing to really explode and take off, hence the billion dollars on the software side and another 10,000 practitioners on the services side," Mills said in an interview (see Q&A below).

Robert Schwartz, CIO at Panasonic Corporation of North America in Secaucus, N.J., was among some IBM customers who took part in a panel discussion during the press briefing. Schwartz said Panasonic has been actively working to improve its information management capabilities. Replacing rudimentary methods, such as sharing information via spreadsheets, e-mails and even faxes, with more integrated systems has helped to shorten product time-to-market cycles by a matter of months, he said.

Schwartz said he now sees radio frequency identification as "the next driving force" for data management, but one that will also bring new challenges. "Think about the massive amount of information that will be generated," said Schwartz, adding that companies that learn how to use all that data will be able to gain competitive advantages.

Wachovia Corp. CIO Joe Monk said in an interview that the Charlotte, N.C.-based financial services firm has spent two years focusing on integrating applications and is now moving "up the stack" to its internal business processes. "How are we managing that data? How are we bringing that data to the right people in the right place at the right time? [Those questions are] all part of what I think is core" to the effort, said Monk, who said he sees himself as Wachovia's "chief transformation officer."

Monk said his biggest challenge isn't the technology but orchestrating all the processes involved with improving data management. That includes dealing with acquisitions and overall business growth "while we're under tremendous efficiency pressure to deliver faster, better and smarter solutions," he said. "I think it's very doable, but if we underestimate the complexity of that orchestration, we're putting ourselves at risk."

"There is a much greater awareness that there is huge value to be derived from data," said Vasant Dhar, a professor and chairman of the information systems group at New York University's Stern School of Business. Accessing increased amounts of data can change the way a company interacts with its customers and even prompt a rethinking of business models, Dhar said.

Add-on Software

IBM is using technologies it acquired last year in the following data management tools:

WEBSPHERE INFORMATION SERVER
Function: Helps users integrate large amounts of data
Based on: Technology from Ascential Software Corp.
Release: In beta testing now; due for release next quarter

WEBSPHERE CONTENT DISCOVERY SERVER
Function: Delivers information to end users based on the context of their requests for data
Based on: iPhrase Technologies Inc.'s OneStep software
Release: Available now

Users Face 'Supercomputing-Type Problems' With Data, Mills Says

NEW YORK

Steve Mills, senior vice president and group executive for software at IBM, spoke with *Computerworld* after last week's data management announcement.

What's really new and different here? You haven't made data management a priority from the start? We certainly haven't just discovered these opportunities. We have been investing for a number of years, believing that this area was poised for a significant uptick in customer spend. We knew that the core issues related to quality of data, large quantities of data, the ability to deal with that data in real time and to be able to give answers back rapidly that were useful. We had a set of concepts behind the investments that we made. But beyond that, we've come to recognize that the size of the opportunity is dramatically greater than we had fully understood. That tends to happen when you perceive things to be true, then you get engaged and you start to really understand the magnitude of the problem. Combine that with the fact that hardware performance capabilities have reached the level of maturity, and you can now attack problems of enormous scale that we couldn't attack before.

What will come out of the $1 billion investment? The last five years have been spent accumulating technology. Concurrent with that, we were off doing these first-of-a-kind exercises with different businesses and governments to test out the capability and verify what we are able to do. This next phase will be hardening solutions for repeatability, along with some amount of technology extension. These are supercomputing-type problems. They have all the characteristics: huge amounts of data, lots of machine cycles to manipulate.

What will the tighter integration between the software group and the services division actually deliver to users? In simple terms, it's more projects for more clients. If we can take what we've already done and repeat it and expand it out to more clients, it will improve our total capacity.

What can customers expect to see over the next year as part of this initiative? Obviously, our investment is going to translate into a greater visibility of IBM coming to them with ideas. We hope in turn they are coming to us. We certainly are anticipating that this is going to drive double-digit growth for us.

–PATRICK THIBODEAU

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THE POSSIBILITIES ARE INFINITE

Microsoft Advances Wireless E-mail Plan

Signs Direct Push deals with device makers, carriers

BY MATT HAMBLEN

MICROSOFT CORP. extended its reach into wireless push e-mail services last week, announcing a group of deals with mobile network operators and handheld device makers that agreed to support its Direct Push technology.

Four network carriers said that they will provide users of devices running Windows Mobile 5.0 with free upgrades to Microsoft's Messaging and Security Feature Pack (MSFP), which includes the Direct Push functionality. Meanwhile, Hewlett-Packard Co. and three other hardware vendors unveiled Windows Mobile-based handhelds that have Direct Push built into them. A fifth said it plans to roll out similar devices in the second quarter.

Reacting to the announcements, which were made at the 3GSM World Congress 2006 in Barcelona, Spain, several users of Research In Motion Ltd.'s BlackBerry service said they welcome the progress that Microsoft has made in wireless e-mail, especially in light of NTP Inc.'s ongoing patent lawsuit against RIM.

But some users and analysts said that Windows Mobile needs to be improved in order to become more widely adopted. For example, there are concerns that the mobile operating system isn't user-friendly and that upgrading to the MSFP won't be easy.

Viable Alternative?

John Halamka, CIO at CareGroup Healthcare System in Boston, said he tested a Palm Treo 700w running Windows Mobile but found it lacking compared with the BlackBerry devices that he and 500 other CareGroup workers use.

"Direct Push is good, but my experience with all Microsoft mobile technologies is that they are not as easy to use as BlackBerry," Halamka said.

But Frank Gillman, director of technology at law firm Allen Matkins Leck Gamble & Mallory LLP in Los Angeles, said that he found Microsoft's advances in wireless e-mail to be an encouraging sign.

"Microsoft's entry into any technology arena ought to seriously scare competitors in that space," said Gillman, who supports 220 attorneys and legal staffers who use BlackBerry devices. "Companies heavily invested in the Microsoft Exchange environment will see [Direct Push] as a viable alternative for wireless e-mail." He included Allen Matkins in that group of users.

John Starkweather, group product manager at Microsoft, said in a telephone interview from Spain that the advent of wireless e-mail via Exchange Server 2003 Service Pack 2 and devices running Windows Mobile 5.0 could vastly increase access to the technology for end users.

There are potentially tens of millions of business users who could take advantage of Direct Push, compared with 8 million to 10 million who are using services from RIM, Good Technology Inc. and other vendors, Starkweather said.

A total of about 100 network operators currently support Direct Push, he added. Among the four that announced free upgrades to the MSFP software last week is one of the top three U.S. carriers, Cingular Wireless LLC, as well as T-Mobile International AG, which is a distant fourth in the U.S. but much bigger in other countries (see box).

Todd Kort, an analyst at Gartner Inc., said he thinks Microsoft's foray into wireless e-mail with Direct Push will ultimately be successful. "But Microsoft's track record with 1.0 releases has been uninspiring, and therefore I believe it will take time for Microsoft to improve their product to the point where many users begin switching to it," Kort said.

Microsoft and its partners are undoubtedly trying to take advantage of RIM's legal woes, said Jack Gold, an analyst at J. Gold Associates in Northboro, Mass. But he noted that Microsoft faces its own patent infringement lawsuit from Visto Corp. over Direct Push. The case, filed in December in U.S. District Court in Texas, involves three Visto patents. Microsoft has declined to comment on the lawsuit. ▸

Message Pushers

Microsoft reported deals with several companies as part of its mobile e-mail announcement.

- **Cingular, T-Mobile, Vodafone Group PLC and Orange SA said they plan to provide Microsoft's MSFP software to their Windows Mobile 5.0 users free of charge.**
- **HP, Asustek Computer Inc., Fujitsu Siemens Computers Holding BV and Chunghwa Telecom Co. announced handhelds with the software vendor's Direct Push functionality.**
- **HTC Corp., another hardware maker, said that in the second quarter it will offer network operators a line of devices that are enabled for Direct Push.**

Female CIOs Rare in California, Study Finds

BY PATRICK THIBODEAU

A study of the 200 largest publicly traded companies in California found evidence of a glass ceiling that's keeping women from reaching the highest executive ranks — including CIO positions.

Only four of the companies had female CIOs as of last August, according to the study, which was released this month by the Graduate School of Management at the University of California, Davis. The researchers identified six women working as CEOs and 11 serving as chief financial officers. Overall, women accounted for just 8.2% of the 1,006 highest-paid executive officers at the companies that were studied, the researchers said.

"Women executive officers in California's largest public companies are a rare breed," the school's dean and two professors wrote in a jointly authored report about the study.

Katrina Ellis, an assistant professor of management who was one of the authors, said last week that the school plans to make the study a benchmark for year-to-year updates on the progress of women in the state's executive ranks.

"We want to point out that companies are missing out on opportunities if they're only looking at half the population to select their directors and executives from," said Ellis, who added that the results are similar to those of studies done in other states.

Ann Franks, CIO at Lanier Worldwide Inc., a $17.1 billion manufacturer of office automation equipment in Atlanta, said the California study "is really discouraging," especially given that state's technology leadership role.

Companies have to include women in their leadership development pools to help address the kind of inequities found in California, Franks said. But she was perplexed by the low number of female IT executives found there. She said she knows of eight other female CIOs in the Atlanta area, and she's involved in advocacy work to help women consider IT as a career and achieve leadership roles once they're in the technology field.

> **"We need to learn how to network like the men do."**
>
> PATRICIA RANDALL, EXECUTIVE BOARD MEMBER, SOCIETY FOR INFORMATION MANAGEMENT

Overall, the percentage of women in the IT workforce declined from a high of 41% in 1996 to 32.4% as of 2004, according to a report released last year by the Information Technology Association of America in Arlington, Va.

Increasing the number of women in IT would help improve their visibility to upper management, said Terrie Jones, founder and CEO of AGSI, an Atlanta-based technology management and consulting firm. The decision of many capable women not to enter IT "is very frustrating to me," she said. "IT is a great mommy track. If you are going to have a child, IT is very forgiving for you to come back into."

Carolyn Leighton, founder of Women in Technology International, a Sherman Oaks, Calif.-based professional development organization, said that women need to promote themselves more. "Men have done this for many, many years, and part of being selected [for management jobs] is making sure that people know about you," she said.

Franks and other women involved in IT agreed that networking is important to high-level job prospects.

"We need to learn how to network like the men do," said Patricia Randall, an executive board member at the Society for Information Management and an account director at Kforce Inc., a professional staffing firm in Tampa, Fla.

The shortage of women in IT has become a leading issue for SIM, which began holding workshops on the subject around the U.S. last year. ▸

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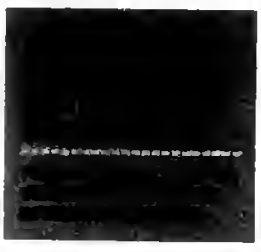

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Server Facts:

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2x THE PERFORMANCE[1]	
3x THE CORES	
6	2
18x MORE COMPUTE THREADS PER RACK	
960	52
⅓ THE SIZE	
1U	3U
¼ THE POWER CONSUMPTION	
300 Watts	1,300 Watts
THE RIGHT ARCHITECTURE FOR YOUR WEB AND APPLICATION WORKLOADS	
ULTRASPARC	Xeon
⅓ THE PRICE	
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Base Pricing – IBM pricing based on configuration with 1 X Dual Core Xeon 3.0GHz processor / 2GB Memory / 4 x 1GbE ports / 1 x PSU / No Disk / SUSE LINUX Enterprise Server 9 1 16 CPUs & Support. IBM com p[illegible] from https www 1 ibm com/products/hardware/configurator/na/ur/submitConfigSelection wss?nc=1131980089146. Sun Fire T1000 Solaris Server configuration based on 1 x 6 Core UltraSPARC® T1 processor at 1 0GHz / 2GB Memory / 4 x 1GbE ports / 1 x PSU / No Disk. IBM x366 product specifications from brochure 08/26/05 http //www 132 ibm com/webapp/wcs/stores/servlet/CategoryDisplay?catalogId 840&storeId=1&langId 1&dualCurrId 73&categoryId=2588660. Power consumption readings come from rating of power supplies. Sun Fire T1000 Solaris server maximum power = 240 Watts. Threads per rack based on priced configurations. 40 x Sun Fire T1000 Solaris Servers delivering 24 threads per server being installed into a rack with 40RU of usable space. 13 x IBM x366 servers can be installed per rack with 40U of usable space. Each server configured with 2 x Xeon cores, with each core delivering 2 threads via hyperthreading. 9.6 GHz represents UltraSPARC® T1 processor maximum cumulative GHz
[1]based on estimated relative webserving performance

BRIEFS

Oracle Purchases Sleepycat Software

Oracle Corp. has acquired open-source database vendor Sleepycat Software Inc. The acquisition extends Oracle's line of embedded databases, which includes Oracle Lite for mobile devices and TimesTen for high-performance, in-memory database applications. Sleepycat's Berkeley DB is embedded in several open-source products, including Linux, the Apache Web server and the OpenLDAP directory. Terms of the deal were not disclosed.

Nortel Spins Off Server Switch Unit

Nortel Networks Corp. has spun off its blade server switch business into a new company called Blade Network Technologies Inc. Private equity firm Garnett & Helfrich Capital, which invested an undisclosed amount in Blade Network, is the controlling shareholder, while Nortel retains a minority stake. The new company is in Santa Clara, Calif., and competes with Cisco Systems Inc. The financial terms of the deal weren't disclosed.

MicroStrategy Adds to Open-Source Support

MicroStrategy Inc. has certified the latest version of its business intelligence software to work with open-source databases MySQL and PostgreSQL. The move is part of MicroStrategy's wider plan to support open-source software. The company's BI products already run on Linux and work with the Mozilla Firefox browser.

Grid Organizations Merge, Ending Rivalry

The Global Grid Forum and Enterprise Grid Alliance Inc. have agreed to merge, combining two groups that have sometimes been at odds despite their similar charters of promoting grid computing. The two groups are now developing a detailed merger plan and hope to establish a new organization by the middle of this year.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

IT Flushes Out Risk Factors...

... to minimize their effects on the business. "The key goal of operational risk is not to eliminate it but to give visibility to it," says Patrick O'Brien, director of product management at OpenPages Inc. in Waltham, Mass. After all, he deadpans, "things will go wrong." But if

Mitigate business risks

you can identify risk variables in advance, monitor them and measure their ramifications, you can mitigate or even avoid them, suggests Peter Morgan, vice president of marketing at OpenPages. Morgan says the company's suite of governance, risk and compliance management software can ingest data from finance, operations and sales management systems and warn corporate execs when the business is teetering into dangerous territory. For example, a new operational risk management module, called OpenPages ORM, can determine when employee turnover in a manufacturing operation is going to hamper production and will automatically signal the folks in human resources to beef up recruiting efforts for assembly-line workers before the situation becomes critical. Morgan says that IT will also be getting domain-specific views of risk awareness via a separate module that's expected to be ready by midyear. Pricing for the OpenPages software starts at about $2,000 per seat.

You *can* monitor for BGP injection ...

... attacks, although you can't prevent them. You read here in the Jan. 30 issue that "there isn't a darn thing you can do" to protect yourself from attackers exploiting the Border Gateway Protocol and hijacking your IP addresses. Well, that's not completely true. You can't stop evildoers from stealing lists of IP addresses via the BGP injection method. But Todd Underwood, chief operations and security officer at Renesys Corp. in Manchester, N.H., contends that you can do something about what he calls "network identity theft." His company's Routing Intelligence service monitors whether your IP addresses are being advertised as belonging to an inappropriate network. It can alert you in as little as five minutes after an incident takes place, Uoderwood says. If you do receive an alert, you will need to contact the Internet service provider used by the bad guy. The ISP's duty is to shut down the attacker, says Underwood. He warns that the BGP injection threat "is scary, and it's not fictional." So do something. The Renesys service starts at $1,000 monthly per named user, who is generally your network admin.

Spot network ID thieves.

Government funding helps kick-start ...

... user-focused IT management institute in Kentucky. Not yet officially launched, the Infrastructure Management Institute (IMI) in Highland Heights, Ky., has received seed money from the feds and Kentucky's Department of Commercialization and Innovation. The institute has also hired executive director Tim Ferguson, who most recently was senior vice president for Unicenter research and development at CA Inc. Initially the brainchild of John Bostick, CEO of dbaDirect Inc. in nearby Florence, the IMI will be operational in 60 to 90 days, Ferguson says. The institute is housed at Northern Kentucky University, which is near Cincinnati. Ferguson says Kentucky and the parts of Ohio and Indiana that the university draws students from aren't as immediately identified with high technology as California's Silicon Valley or Route 128 in Massachusetts. Still, he claims the school is one of the few in the nation that has created a College of Informatics, merging computer science, IT management and telecommunications into a single discipline. The IMI plans to build a lab to test real-world IT problems for its members, and it will develop a curriculum of conferences, webcasts and collaborative workshops. The institute also will certify workers in IT domains instead of on individual products. Ferguson says most large companies want IT staffers to be certified in functional areas such as databases or networking because they use multiple products in their data centers.

$1M
Combined government investment in the Infra structure Management Institute

Manage corporate slide decks ...

... with an alternative to PowerPoint. James Ontra, CEO of Ontra Presentations LLC in New York, thinks there's a better way to equip business folks with tools for presenting corporate data: Use a slide collection that's built on a centrally controlled database. That's the key difference between his company's PowerPoint-compatible Ontra Presenter software and Microsoft Corp.'s ubiquitous product. Presenter lets end users access a central database of slides and arrange or even alter them as needed. Slides can then be stored locally on laptops and get updated with the latest information from the central repository via a mouse click, Ontra says. He calls presentation tools "the missing piece of CRM." In fact, by year's end, he plans to integrate Presenter with CRM offerings such as Siebel applications and Salesforce.com Inc.'s hosted software. Subscription pricing starts at $250 per month for five end users. ›

Store slides in a central database

SONICWALL

BRIEFS

SAP's Appeal of Oracle Pact Denied

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CTO Leaves Nokia To Take CEO Job

Pertti Korhonen, chief technology officer and executive vice president of technology platforms at Nokia Corp., has been named CEO of Elektrobit Group Oyj, a manufacturer of products and testing systems for the wireless industry. Nokia named Niklas Savander, head of its mobile devices business unit, to take over the technology platforms post and Chief Strategy Officer Tero Ojanpera as CTO.

HP, Novell Unveil SUSE Linux Pack

Hewlett-Packard Co. and Novell Inc. have agreed to jointly offer a bundled license that they say makes it easier and cheaper to run Novell's SUSE Linux Enterprise Server on HP systems. The Enterprise Linux 8-License Value Pack provides a subscription to Novell SUSE Linux Enterprise Server 9 for HP ProLiant and BladeSystem servers. The license costs $5,700 per year and includes support for 25 instances.

Feds Seek Outside Help To Boost E-health Efforts

Contractors to create guidelines for regional exchange of health data

BY HEATHER HAVENSTEIN
SAN DIEGO

OFFICIALS OF health care groups working on regional data exchange systems last week said they backed the federal government's new plan to develop standards and guidelines to help in their grass-roots efforts.

David Brailer, national coordinator for health information technology, said that over the next year, his office in the U.S. Department of Health and Human Services will formulate guidelines and minimum standards for regional health information organizations (RHIO).

Speaking to an audience at the Healthcare Information & Management Systems Society conference here, Brailer said that his office will begin seeking bids within a month for a contract to evaluate existing RHIO efforts and to develop guidelines for improving and expanding the programs.

Brailer said the effort will include developing guidelines for creating statewide groups to help local RHIOs deal with the governance, financial and operational challenges of working together. "We want RHIOs to know where we are heading so they can make their plans accordingly," he said. "If we have RHIOs governing themselves locally, there needs to be something that ties them together."

Reason to Believe

John Blair, president of Taconic IPA Inc. in Fishkill, N.Y., said Brailer's effort is encouraging because many RHIOs throughout the country are struggling. In 2001, the physician practice group started a successful RHIO called the Taconic Health Information Network and Community in the Hudson Valley region of New York.

Blair said the plan "shows that the federal government is serious about this [and] that they will help those fledgling organizations."

Edward Ewen, director of clinical information at Christiana Care Health Services, a health care system in Wilmington, Del., said he hopes that the project can produce health standards that improve communication between RHIOs.

"The development of national standards would be a great relief to us. It makes [the RHIO] much less risky," Ewen said. "One of our concerns is that we will develop something that is not interoperable." Christiana participates in the state of Delaware's RHIO, which is called the Delaware Health Information Network.

Mark Jacobs, director of technology services and data center operations at York, Pa.-based WellSpan Health, said RHIOs need guidelines and standards to be able to exchange data. Most of the organizations today, he said, have vastly different models for addressing governance and financing, and defining the services they will provide.

WellSpan Health, which operates two hospitals in Pennsylvania, participates in the Pennsylvania eHealth Initiative RHIO.

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In November, HHS awarded a $1.6 million contract to four companies — IBM, Computer Sciences Corp., Accenture Ltd. and Northrop Grumman Corp. — to develop a prototype infrastructure for a national health information network.

The HHS plan so far is focusing on encouraging health agencies to participate in statewide RHIOs and to support national electronic health records programs by 2014, Brailer said.

"If it turns out we can't get traction," mandates are likely, he said. "We are beyond the point where this is optional. The clock is ticking."

To help boost the program, Brailer said his office is seeking funding of $116 million in fiscal 2007, almost twice its 2006 budget of $61 million.

To date, according to Brailer's office, approximately 66 RHIOs are either in the planning stages or already sharing data electronically. ▸

SURVEY

State of EMR

Of 200 health care leaders surveyed in December and January:

- **51%** identified patient satisfaction as a top business issue
- **44%** said reducing medical errors is a top priority
- **87%** have or plan to purchase an EMR system
- **24%** have a fully functional EMR in place
- **14%** are participating in a regional health information organization

SOURCE: [illegible]

Health Groups Use IT to Improve Patient Care

SAN DIEGO

HEALTH CARE PROVIDERS are taking on new IT projects designed to bolster their efforts to provide better care to patients.

Some providers are using their "pay for performance" programs to help fund costly IT upgrades, according to speakers at the Healthcare Information and Management Systems Society conference here last week. Such programs use IT systems to measure the performance of physicians, and in some cases, health groups are using the payouts from such programs to upgrade their systems.

For example, Beaver Medical Group LP in Redlands, Calif., received $1.2 million last year from the Integrated Healthcare Association (IHA) and invested half of that in IT, said Ronald Bangasser, Beaver Medical's director of external affairs.

The IHA, a nonprofit collaborative of physicians, health care systems and health plans, last year paid out $90 million to physicians who met quality standards. Many of the 225 groups in the IHA are using the rewards to update their IT systems, said Bangasser, who is chairman of the IHA's technical committee.

Health insurer Cigna Corp. is also using its systems to measure how physicians meet certain quality criteria. Under the program, patients make lower co-payments if they select doctors who meet the criteria, said J. Paul Oates, vice president of medical management systems at Philadelphia-based Cigna. "Our employers are insisting that we measure performance," he said.

Cigna plans to expand the program later this year to measure the performance of primary care physicians in addition to the specialists measured to date.

David Brailer, national coordinator for health information technology for the U.S. Department of Health and Human Services, described pay-for-performance programs and health IT as "first cousins."

Still, pay for performance can't be the sole motivator for increased IT investments, Brailer said, noting that smaller practices may be at a disadvantage. "Pay for performance and health information technology have got to be ubiquitous," he said.

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GLOBAL DISPATCH

An International IT News Digest

Korean Regulators Search Intel's Offices

SEOUL, SOUTH KOREA

INVESTIGATORS FROM South Korea's Fair Trade Commission paid an unscheduled visit to Intel Corp.'s offices in Seoul early this month, seeking additional documents as part of an ongoing investigation into the company's business practices.

The investigation began last June, when regulators requested documents from Intel related to its dealings with Korean PC makers, including information about its marketing and rebate programs. Intel revealed that the probe was under way in a filing submitted to the U.S. Securities and Exchange Commission last August.

South Korea's investigation is one of several government probes involving Intel. Last July, the European Commission raided Intel's offices in Swindon, England, and Munich as part of an investigation into the company.

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■ **SUMNER LEMON** IDG NEWS SERVICE

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CANBERRA, AUSTRALIA

AUSTRALIAN PRIME Minister John Howard has approved new funding of 130 million Australian dollars ($96 million U.S.), to be provided jointly by the federal government and the country's states, for electronic health initiatives.

During a meeting of the Council of Australian Governments that was held here on Feb. 10, Howard and Australia's state premiers announced plans to use the funds to create a common language for electronic health care communications. The money will also be used to set up unique identifying numbers for the country's 400,000 health care practitioners.

Officials said that the common communications language is designed to help ensure the interoperability and security of electronic health records and to aid in Australia's biosurveillance projects.

■ **MICHAEL CRAWFORD** COMPUTERWORLD TODAY (AUSTRALIA)

GLOBAL FACT

The number of mobile phones sold in Taiwan in last year's third quarter.

SOURCE

Prime Minister Pushes For Service Upgrades

AUCKLAND, NEW ZEALAND

HELEN CLARK, New Zealand's prime minister, last week called for new initiatives to ensure faster Internet access at more competitive prices in her opening address to the country's parliament for 2006.

Clark's speech was viewed as the strongest indication yet that the country's telecommunications industry faces further regulation.

Internet users in New Zealand have connection and upload speeds that are too slow, as well as restrictive data caps, Clark told the parliament.

The prime minister said she is also unhappy that New Zealand continues to lag behind many of the other 29 countries in the Organization for Economic Co-operation and Development in the reach of broadband services. ▶

■ **JUHA SAARINEN** COMPUTERWORLD NEW ZEALAND ONLINE

Compiled by Mike Bucken.

Briefly Noted

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Salesforce.com's CRM Service Hiccups Again

Launches Web site to track outages and performance

BY MARC L. SONGINI

In the wake of several service outages in recent weeks, Salesforce.com Inc. has created a Web site to update users of its hosted CRM software on system performance and any problems it encounters.

An outage earlier this month was the latest service disruption to affect customers of the San Francisco-based company, which claims to have about 350,000 subscribers.

The new Web page, called Trust Salesforce.com, is the most recent effort by the company to calm users' fears. The site went live last week.

In an e-mail message, Salesforce.com CEO Marc Benioff said the site will offer users data on the system's performance, throughput and transaction rates. It will also provide information on the cause of any problems.

In addition, a $50 million overhaul of the hosted system's infrastructure is slated to be completed this quarter. The work includes the development of a load-balancing system called Mirrorforce that will replicate data among data centers so that if one goes off-line, another can immediately take over its processing workload.

The most recent service disruption, which lasted 81 minutes, occurred on Feb. 9, Benioff confirmed in his e-mail.

Customers interviewed last week had mixed reactions to the latest outage.

"Clearly, something is not right in Salesforce land," said Tom Kramer, president of San Francisco-based Bella Pictures, which relies heavily on the service. Kramer said the most recent outage cut productivity at the wedding photography company. In addition, he said, Salesforce.com did not notify Bella Pictures of the outage. Notification from the vendor would help his company work through outages, Kramer said.

On the other hand, the outage "was not a significant problem" for Milpitas, Calif.-based Phoenix Technologies Ltd., said CIO Clifford Bell. Phoenix, a maker of PC systems software and tools, uses Salesforce.com's service for its sales and marketing operations.

Bell said he received a note from Benioff that detailed Salesforce.com's plans to put a stop to the outages. "Funny, but I never have gotten an e-mail from Larry Ellison for any Oracle issues or from Bill Gates when there are Microsoft issues," Bell said, adding that he thinks Salesforce.com is working hard to correct the problems.

"You have to wonder why this is happening," said David Dobrin, an analyst at B2B Analysts Inc. in Cambridge, Mass. "Is it an artifact of their changeover to a more robust, dual data center model? Is it a size problem? Are they having the same problems with their hardware and software vendors that other people frequently have?"

Dobrin noted that much of Salesforce.com's customer base is averse to working with IT. Those customers, therefore, will be more aggravated by downtime and more willing to express their dissatisfaction than those who rely on internal IT resources, he said. ▶

Timeline: Salesforce.com's Outages

DECEMBER 2005 JANUARY 2006 FEBRUARY 2006

GLOBAL

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In an e-mail message, Salesforce.com CEO Marc Benioff said the site will offer users data on the system's performance, throughput and transaction rates. It will also provide information on the cause of any problems.

In addition, a $50 million overhaul of the hosted system's infrastructure is slated to be completed this quarter. The work includes the development of a load-balancing system called Mirrorforce that will replicate data among data centers so that if one goes off-line, another can immediately take over its processing workload.

The most recent service disruption, which lasted 81 minutes, occurred on Feb. 9, Benioff confirmed in his e-mail.

Customers interviewed last week had mixed reactions to the latest outage.

"Clearly, something is not right in Salesforce land," said Tom Kramer, president of San Francisco-based Bella Pictures, which relies heavily on the service. Kramer said the most recent outage cut productivity at the wedding photography company. In addition, he said, Salesforce.com did not notify Bella Pictures of the outage. Notification from the vendor would help his company work through outages, Kramer said.

On the other hand, the outage "was not a significant problem" for Milpitas, Calif.-based Phoenix Technologies Ltd., said CIO Clifford Bell. Phoenix, a maker of PC systems software and tonls, uses Salesforce.com's service for its sales and marketing operations.

Bell said he received a note from Benioff that detailed Salesforce.com's plans to put a stop to the outages. "Funny, but I never have gotten an e-mail from Larry Ellison for any Oracle issues or from Bill Gates when there are Microsoft issues," Bell said, adding that he thinks Salesforce.com is working hard to correct the problems.

"You have to wonder why this is happening," said David Dobrin, an analyst at B2B Analysts Inc. in Cambridge, Mass. "Is it an artifact of their changeover to a more robust, dual data center model? Is it a size problem? Are they having the same problems with their hardware and software vendors that other people frequently have?"

Dobrin noted that much of Salesforce.com's customer base is averse to working with IT. Those customers, therefore, will be more aggravated by downtime and more willing to express their dissatisfaction than those who rely on internal IT resources, he said. ▸

Salesforce.com's Outages

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†The Business Performance Forum Study, 2005.

Source Code: AD021

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EDGE TECH CORP ca SONY

Lack of Support Slowing Spread Of Open-source Applications

But backers at conference say that enterprise options are on the rise

BY ERIC LAI
SAN FRANCISCO

Of all of the virtues that backers of open-source software tout, widespread availability of enterprise-level support is not among them.

In fact, a lack of support has been a drawback for most corporate IT decision-makers when they look to add open-source tools to their software stacks, said a panel of users and vendors at the Open Source Business Conference here last week.

The panelists noted that apart from Linux vendors such as Red Hat Inc. and Novell Inc., the companies selling open-source software today are mostly single-product firms barely out of the start-up stage.

Panelist Brian Howard, senior vice president for corporate planning and architecture at shipping firm APL Ltd. in Oakland, Calif., said the dearth of support options limits the ability of users to easily switch from one open-source product to another — something that has been perceived as an advantage of the technology.

Howard contended that open-source users are effectively locked into products as a result of the scarcity of support providers.

"There are a lot more people standing in front of me who say they can support my .Net stack than people who say they can support open-source," he said.

The panelists said that large companies are more likely to prefer the uncomplicated safety net of being able to turn to a single support provider in the event of problems.

"More of our customers are telling us they want to try open-source but that they have concerns," said panelist Phtlip Robinson, an open-source manager in Hewlett-Packard Co.'s consulting group.

Small Suppliers Emerge

HP and rival IBM are among the few large vendors providing enterprise support for open-source software. At the same time, a number of small, third-party companies are emerging that provide integration, maintenance and interoperative certification for open-source applications.

Some of those companies, such as start-ups OpenLogic Inc., Virtuas Solutions Inc., Cignex Technologies Inc. and SpikeSource Inc., claim to offer all-in-one support that competes with or complements the HP and IBM offerings.

"People don't want 150 support contracts; they don't want to have to monitor 150 Web sites," said panelist Steven Grandchamp, CEO of Broomfield, Colo.-based OpenLogic.

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However, Grandchamp added that the number of open-source support options for enterprise users is growing fast.

On the other hand, Boyd Hemphill, a database administrator at the Texas Education Agency, said he doesn't need a single vendor to support all of his open-source products. The department's open-source library includes Red Hat Linux, the MySQL database, Eclipse development tools, the Apache Web server and the PostNuke content management system.

"The only support I'm interested in is for Red Hat. Everything else I can find on my own," Hemphill said, citing his posts to open-source forums that resulted in personal responses from top vendor executives.

Charles King, an analyst at Hayward, Calif.-based Pund-IT Research, said that such ad hoc support isn't adequate for most large enterprises.

"If a server at a college goes down, it means a whole lot less than a server used to crunch business applications going down," he said.

Moreover, King said, big businesses tend to see working with small software vendors as both an inconvenience — because of billing and invoicing issues — and a financial risk. ▸

Continued from page 1

Security

to a risk-based approach to vulnerability management over the past three years.

As part of the effort, Standard Chartered has classified all of its core information systems on a value scale of high, medium and low based on their importance to its business operations and the disruptions or losses that would result from security failures on them, Meakin said.

He added that the bank has developed similar measurements for threats and vulnerabilities and the likelihood that they will be exploited on each of its systems.

The approach has given Standard Chartered a much clearer picture of IT risks enterprisewide, Meakin said, adding that it has also helped the bank to better marshal its security resources.

As an example, he said that about three years ago, the bank was considering encrypting all confidential traffic moving over one of its WANs because of security concerns. But a metrics-based risk assessment showed that such encryption was overkill.

"I would say one of the worst things I could do is spend too much money on security," Meakin noted.

Moving From 'Gut Feel'

Zions Bancorporation in Salt Lake City started using metrics as part of its IT security efforts about four years ago. The goal was to move away from relying on "a subjective gut feel of risk" and get a more accurate view of threats, vulnerabilities and available security controls, said Preston Wood, the bank's chief information security officer.

"It's very much about making sure you spend just enough [on security] — not more, not less," Wood said.

The metrics that the bank's security staff put in place have given officials at Zions a much clearer picture of the effectiveness of both its tactical and strategic security efforts, according to Wood.

He said the metrics have also been useful in getting the bank's business units to understand the nature of the IT security risks they face.

Meakin acknowledged that setting both quantitative and qualitative security metrics can be a big challenge, given the dynamic nature of threats and the difficulty involved in attaching a definite value to information assets.

"But there's no excuse not to start doing it," said Dan Geer, chief scientist at Verdasys Inc., a Waltham, Mass.-based security software vendor. "This is an idea whose time has come."

Despite the challenges, it is possible to begin gathering and using metrics, Geer said. He added that the goal shouldn't be so much about arriving at specific numbers for measuring security risks but about getting a feel for what's important and why.

"I'm fairly certain that A is better than B and that B is better than C," Geer said. "I'm not sure if I can say A is 3.2 [times better than] B and that B is 6.9 [times better than] C." But that isn't even necessary, he said.

The key is not to make the whole process overly complicated, agreed Pete Lindstrom, an analyst at Spire Security LLC in Malvern, Pa.

Security-risk metrics are "simply a probability, based on legitimate experience of your network, that some bad activity is going to occur," Lindstrom said. ▸

Methods for Calculating Security Risks

STRATEGIC METRICS: Used to assess the value of IT assets, the vulnerabilities faced by those assets, what measures are available to protect them and at what cost. They also let users look at the level of exposure to security threats and the probable damage that would result if one were realized.

TACTICAL METRICS: Includes baseline measurements, such as categories and numbers of IT assets, threats and vulnerabilities in important business areas. Also used to measure figures such as the percentage of assets within a category that are under an acceptable level of control.

SOURCE [redacted]

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SOURCE: ENTERPRISE MANAGEMENT ASSOCIATES, BOULDER, COLO.

YOUR

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The Eckert Tapes: Computer Pioneer Says ENIAC Team Couldn't Afford to Fail – and Didn't

The all-electronic system made its debut 60 years ago. In interviews taped in 1989, co-inventor J. Presper Eckert discusses the technology behind ENIAC and debunks some myths.

BY ALEXANDER RANDALL V

THERE ARE two epochs in computer history: before ENIAC and after ENIAC. While there are controversies about who invented what, there's universal agreement that the Electronic Numerical Integrator and Computer was the watershed project that showed all-electronic digital computing was practical. ENIAC was unveiled Feb. 14, 1946, after nearly three years of development at the University of Pennsylvania's Moore School of Electronics.

was chief engineer on the ENIAC project

The two men most responsible for its success were **J. Presper Eckert** and John W. Mauchly, who together went on to build commercial systems such as Univac and also founded one of the companies that merged to form Unisys Corp.

Eckert died in 1995. I recorded two days of interviews with "Pres" in 1989, when he was 70 years old. My father was Eckert's best friend — as a child, I played with his children, and I visited him regularly as an adult. I sat on the interview tapes for many years but decided to transcribe them for ENIAC's 60th anniversary and release the text publicly. Excerpts from the interviews follow:

How did calculating machines work before ENIAC? Well, a person with a paper and pencil can add two 10-digit numbers in about 10 seconds. With a hand calculator, the time is down to 4 seconds. The Harvard Mark I, an electromechanical computer, could add two 10-digit numbers in 0.3 seconds, about 30 times faster than paper and pencil. The ENIAC was the first electronic digital computer and could add those two 10-digit numbers in 0.0002 seconds — that's 50,000 times faster than a human, 20,000 times faster than a calculator and 1,500 times faster than the Mark I. For specialized scientific calculations, it was even faster.

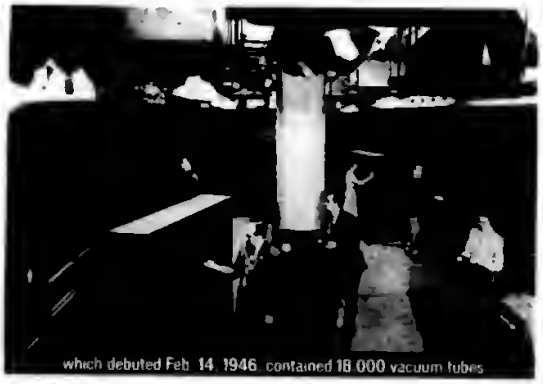
So it's a myth that ENIAC could only add, subtract, multiply and divide. That's a calculator. ENIAC could do three-dimensional, second-order differential equations. We were calculating [artillery] trajectory tables for the war effort. The trajectory tables were calculated by hundreds of people operating desk calculators — people who were called "computers." So the machine that does that work was called a computer.

There's a story that ENIAC dimmed the lights in Philadelphia when it was in use. That story is total fiction, dreamed up by some journalist.

Did the military guys working on ENIAC salute the machine? Another ENIAC myth.

How many tubes did ENIAC use? ENIAC had 18,000 vacuum tubes. The tubes were off-the-shelf; we got whatever the distributor could supply in lots of 1,000. We used 10 tube types but could have done it with four; we just couldn't get enough of them. We decided that our tube filaments would last a lot longer if we kept them below their proper voltage — not too high or too low. A lot of the circuits were off-the-shelf, but I invented a lot of the circuits as well. Registers were a new idea. So were integrator circuits.

> **It is shocking to have your life work reduced to a tenth of a square inch of silicon.**
>
> J. PRESPER ECKERT, CO-INVENTOR OF ENIAC



which debuted Feb. 14, 1946, contained 18,000 vacuum tubes

Are any of your circuits still in use in personal computers? No, but that's true of any first invention. Edison's original light bulb bears no resemblance to a modern bulb. They do the same thing but with totally different components. Same with the computer. What did survive were the concepts, not the hardware. The idea of a subroutine was original with ENIAC. Mauchly had this idea based on his knowledge of the inner workings of desk calculators. On Mark I, if they wanted to do a calculation over and over, they had to feed the same tape in over and over. We invented ways to run the same subroutine without any mechanical input. The idea of using internal memory was also original with ENIAC.

There's a story that some guy was running around with a box of tubes and had to change one every few minutes. Another myth. We had a tube fail about every two days, and we could locate the problem within 15 minutes.

Was ENIAC programmable? Yes and no. We programmed the machine by plugging wires in from place to place. That's not hard-wired; it's not software; it's not memory. It's pluggable programming. And we had switches to set the functions.

How old were you? We signed the contract on my 24th birthday, May 9, 1943.

What prepared you for building an electronic computer? Remember, in that era, Philadelphia was "Vacuum Tube Valley." Radios and televisions were predominantly made in Philadelphia. I worked on primitive television at Farnsworth [Television] back as a teenager, and at Penn I had been working on various radar problems trying to measure the time for a pulse to go out and come back. All this is a good lead-in for building an electronic computer.

Was it you, or was it the times? Well, I may have been uniquely prepared. I was very good in math, and I was fascinated with all electronics. I was designing electronic gadgets as a kid. Maybe I had the right fusion of interests. But every inventor stands on the pedestals built by other people. If I hadn't done it, someone else would have. All that any inventor does is accelerate the process. The main thing was we made a machine that didn't fail the first time. If it had failed, we might have discouraged this line of work for a long time. People usually build prototypes, see their errors and try again. We couldn't do that. We had to make it work the first time out.

When you were working on ENIAC, did you have any inkling that these things eventually would be laptop-size and that everyone would own one? No one had any idea the transistor and chip technologies would come along so quickly. It is shocking to have your life work reduced to a tenth of a square inch of silicon. ▸

Randall is a professor of communication at the University of the Virgin Islands and director of the school's new computer communication laboratory.

BEA Systems Updates Former Plumtree Business Process Management Tool

New version includes links to AquaLogic collaboration software

BY HEATHER HAVENSTEIN

BEA Systems Inc. last week unveiled a new version of a tool it acquired last year that it said can he used to build and manage collaborative business processes.

The updated AquaLogic Interaction Process, previously called Plumtree Process Server, was added to the BEA product line following BEA's purchase of Plumtree Software Inc. last October.

Version 1.5 of the tool set is tightly integrated with BEA's AquaLogic Interaction Collaboration tool, allowing multiple people to use and manage documents and project information through portals, BEA said.

The software begao shipping at the end of Jaouary.

Andrew Reid, vice president of software development at Red Bank, N.J.-based home builder K. Hovnanian Homes, said his company plans to use the updated BEA tool to automate the paper-based processes for granting user access to restricted applications and data.

Reid said he expects the AquaLogic tool set to ease the process of moving requests through supervisors and district managers.

In addition, he said the updated version will let the company create the electronic records that are required by the Sarbanes-Oxley Act.

Reid said K. Hovnanian, a user of the earlier Plumtree software, also plans to test the new version to determine whether it can he used to queue data updates — such as changes to the status of a home under construction. That capability would let users view data that is compiled when Internet connectivity fails or is unavailable, he said.

"We are finding ourselves using a lot more hosted solutions for different functionality, so we need a basis for managing those integration [points] in a partially connected scenario," Reid said.

"It is a question of heing able to work in a connected and disconnected mode and queueing up [data] to be delivered later," he said.

Extending Capabilities

The former Plumtree tool extends BEA's business process management (BPM) capabilities heyond its traditional focus on the business processes of systems. Tbe new tool models and manages the processes that workers follow, according to Christine Wan, BEA's director of product marketing.

The AquaLogic Interaction Process software can attach collaboration documents to work items, map a business process to a collaboration project and allow users to participate in threaded discussions within a process.

The software can he used to create and manage processes for expense approval, benefits admioistration, customer management, field service management, inventory management and sales cycle management, Wan said.

"It is the first time that BEA is addressing the human workflow side," she said.

AquaLogic Interaction Process also allows business analysts to model and design a business process and to designate the roles for participants in a process, Wan said.

The tool includes a process-execution engine that orchestrates the activities of users and their roles with the back-end system, and it notifies users when they have tasks that need to be performed.

Version 1.5 also integrates with BEA's AquaLogic Interaction Collaboration product so users can share documents with others who need to work with a process by checking documents in and out. ▸

with BEA AquaLogic Interaction Collaboration

prebuilt portlets to let users.

- Track task lists
- Initiate processes
- Navigate and search processes
- Manage notifications
- Issue alerts when actions are required

DON TENNANT

Getting 'Global'

TRUE OR FALSE: If your employer has operations in multiple countries across multiple continents, it follows that you work for a global company.

If you've read our special report on globalization, "Navigating Global IT," which begins on page 23, you've no doubt concluded that that statement is as false as Grandpa's teeth. If you haven't read it yet, I urge you to do so. Because even if you already get it, there likely are plenty of people in your organization who don't. And this is a great resource to help you spread the message.

Alfonso Cos, vice president for global supply network solutions at Procter & Gamble, nailed it when he said, "There's a big difference between being a global company because you have operations in many countries and being global because you operate globally." To accomplish the latter, P&G has undertaken a four-year project to standardize on SAP for its manufacturing systems in 40 countries and folded its disparate IT groups into a single organization. Simply having a presence in those countries makes you international, but it isn't what makes you global.

Gartner analyst Susan Dallas summed it up similarly: Whether a company is truly global depends on the degree to which its operations in different countries are doing things in common, as opposed to operating like a collection of companies with a headquarters that isn't much more than a holding company. I'd say she has something there. And she's in good company.

I recently spoke with several members of the 2006 class of *Computerworld* Premier 100 IT Leaders who made it clear that they never would have accomplished what they have for their companies if they didn't get what it means to be global.

Steve Silverman, vice president of IT for global operations at Bausch & Lomb, is about two-thirds of the way through a six-year plan to standardize his systems worldwide on Oracle/PeopleSoft. And it hasn't been easy.

"We all know that when you have packages you've customized over 15 years, it's pretty hard to replace it with a generic package," Silverman says. Getting global consensus and buy-in to enable standardization is a monumental task, but one that can be accomplished with a well-developed communications strategy, he has found.

Fred Danback, vice president of global technology at a global financial services firm in Stamford, Conn., began work in 2001 on a shared services infrastructure for the company's 100 locations in 30 countries. Among the factors that made it successful was a willingness to adopt best practices regardless of where in the world they originated. "We can't say that just because it wasn't invented here in the U.S., it's not the best," Danback says. That might go without saying in theory. But it takes a strong IT leader who really gets it to put it into practice.

Moreover, it isn't just about unifying platforms. Talk to Danback, and you'll understand that it's also about unifying people.

"The things that motivate Americans are the same things that motivate people in other countries," he says. "They want progression, they want mobility, they want to be able to succeed and excel in their career." So as part of an aggressive expansion into India, Danback's company has opted against outsourcing in favor of hiring Indian workers and truly making them a part of the company. "We feel that there is a tremendous amount of potential for these people to move and grow within the organization," Danback explains. Talk about getting it.

There's a lot more in our special report. Go get it.

Don Tennant

DAVID MOSCHELLA

The Truth Is Out There, On the Net

OVER THE past few weeks, there have been two front-page news stories that force us to take stock of the effects of the Internet on what information we are and aren't allowed to see. This debate is more relevant to corporate America than might initially be apparent.

If you follow current affairs at all, and certainly if you live, like I do, in London, you can't help but be absorbed by the great cartoon debate. It's everywhere. While Europeans try to understand how and why 12 drawings in a Danish newspaper sparked such a fierce global reaction, from an Internet perspective, there are broader lessons regarding information access, responsibility and self-censorship.

The debate in the U.K. has been particularly instructive. While publications in Germany, France, Norway and elsewhere have for various reasons decided to reprint the controversial cartoons, the normally freewheeling British press has not, again for a mix of reasons, some more admirable than others. But as a sort of compromise, many leading British publications have simply provided a link to one of the numerous Web sites where the cartoons can be seen.

This sends a very odd message. The same media giants that so often dismiss the public Internet as a dangerous wilderness are now basically saying that the Net and especially blogs are the place to go if you want the whole, uncensored truth.

Halfway around the world, we had a similar compromise. China's desire to control what its citizens can and can't read put Google (and others) in a no-win dilemma — either set aside your own beliefs and practices, or miss out on the Chinese market

altogether. As you know, Google (and everyone else) has put business first. So in this case, the result was that for people in China, the Internet became yet another place to see a partial, censored truth. Not a great message either.

But before throwing stones at Google, the press or China, take a closer look at your own house. Does your company's Web site provide the whole, unvarnished truth? Of course it doesn't. Companies don't think twice about providing exactly as much "truth" as they think serves their interests; they hire huge teams of marketing, public relations and investor relations people skilled in the art of self-serving communication, and they remind employees to be careful about what they say.

What makes the Internet unique is that it can bypass these machinations and compromises. The Net provides an unprecedented global voice to any would-be whistle-blowers or others who want to expose information that the powers that be deem best suppressed. That some of this truth is often lost among the Web's many frauds, cranks and conspirators doesn't change the fact that the Internet is likely to remain the one place where accurate, unvarnished information is broadly available, especially when a Web-based source is endorsed by established, "reputable" media.

Companies' reputations are more fragile than ever before, and also more important. But the major media only occasionally focus on the truth about any one company or industry. This leaves lots of room on the Internet for other voices to be heard. You might want to link to them; you might wish you could blot them out. But do you even know who is out there and what they are saying? ▶

THORNTON A. MAY

Entering the Age of Big Information

HISTORIANS WILL ultimately come to a consensus on what to call the days between the frenzy that was the dot-com bubble and the period we are now on the cusp of entering. I call this brief blip (1995-2005) the Age of Little Information.

I come to this label not because the age exhibited a lack of information. Quite the contrary: it was during this period that information — previously locked away in analog form — became widely digitized. All this newly digitized data had little impact on behavior, however.

THORNTON A. MAY is a longtime industry observer, management consultant and commentator. Contact him at [redacted]

We learned to our lament during this era that digitized information doesn't necessarily mean managed or acted-upon information. We are now exiting an era of undermanaged and only-occasionally-acted-upon information and entering the Age of Big Information, a more active, intense and aggressive era, in which we will be held much more accountable for our data management behaviors. In the Age of Little Information, we were data vegetarians. In the Age of Big Information, we will have to become knowledge carnivores.

In this new age, there will be a lot of information. Working with epistemologists and library scientists and archivists, I have estimated that information to the tune of approximately 1,500 Library of Congress collections (over 10 petabytes) enters the global data stream every day.

In the Age of Big Information, we are moving completely away from the once-a-day-ness of the U.S. Postal Service and the 6 o'clock news to the always-on-ness of e-mail and cell phones. Even the staid Census Bureau, which since 1790 has undertaken a decennial count of the U.S. population, has accelerated its information metabolic rate, conducting censuses of economic activity and state and local governments every five years, and more than 100 other surveys every year. The American Community Survey will soon arrive monthly.

Another difference in the Age of Big Information is that a much greater array of powerful tools will be available to manage and manipulate this ever-expanding information base, allowing us to derive meaning from it all.

But the biggest difference — and I am sorry to throw a monkey wrench into Nicholas Carr's personal wealth engine — is that because there is more information and there are more ways of knowing, there will be more competitive advantage to be generated from the informed and creative management of information and information technology.

In the Age of Little Information, scads of iPod-ers blithely toted orders of magnitude more computing power than that which carried the Apollo astronauts to the moon, a fact that most of them failed to appreciate. Steve Jobs can rest assured that the iPod is insanely great technology, but it represents passive information management.

In the Age of Big Information, we will be surrounded by tools of mass instruction. Knowledge tools will have the capability of delivering all the smartness of the planet to a device that fits in the palms of our hands. What are you going to do with all this capability?

In the Age of Big Information, we will be awash in information, as we are today, but we will begin to improve our ability to make use of all the information that is deluging us. Increasingly, your success in business will depend on the facility with which you and your enterprise can connect and then convert heretofore unimaginably large, complex, litigable and accessible sets of data into action that is timely and appropriate to the context of the information. ▶

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READERS' LETTERS

Opera Holes Were a Phantom Menace

I FIND IT quite strange that you deem a security issue that was properly fixed almost six months ago interesting news ["Opera Struck by Hidden Hole," *Computerworld.com*, Dec. 14].

In the article, the author uses the present tense for something that should have been past tense throughout. He suggests updating to v8.02, when the current version of Opera is v8.51. And he fails to adequately discuss that Internet Explorer had the same vulnerability, which it took Microsoft six months to fix, whereas Opera fixed it within a month. (That is why Secunia delayed publishing the Opera advisory for so long!) The author fails to mention this discrepancy in the way that security is treated by the two companies.

The use of the wrong tense, misleading update information, minimizing the discussion of the exact same flaw in other products and failing to comment on the seriousness with which they were fixed creates an article that is both unfair and misleading.

Ian Andolina
London

Puzzled by FTC Spam Assessment

MAYBE TECHNICALLY, on a national average, the statistics show that spam has gone from 77% to 68%, as stated in the article "FTC: Computer Users Seeing Less Spam, Law Helped" [*Computerworld.com*, Dec. 20], but my first reaction was, "What rock are they hiding under?" My company's decrease has been due to implementation of additional systems to filter, scan and prevent spam from reaching the desktop. But for every filter applied, the spammers create a new variation, and we still end up with more junk in our e-mail than should be dealt with on a normal basis. Add to that the exponential growth of malware, and the time and cost dedicated to fighting these threats are on a drastic rise, not a decrease.

The CAN-SPAM Act may have had a minimal effect, but it's hardly making a dent and definitely won't keep up with the offenders.

David Buzzell
CIO, The Sedona Group, Moline, Ill., dbuzzell@sedonagroup.com

THE FTC might be seeing less spam, but I'm not! I manage a couple of small Web sites and have a few personal e-mail accounts. I get just as much spam today as I did two years ago. I don't know just how the FTC measured the amount of spam being sent, but they couldn't have done it at the ISP level. This is where a tremendous portion of spam is filtered out, so that customers never even see it. That doesn't mean it wasn't sent, however.

Don Smutny
Lee's Summit, Mo.

HMM. I can either send opt-out messages that the legitimate 4% will honor, or avoid confirming my e-mail address to the 96% that are illegal spammers. What to do, what to do?

Randy Thornson
Fort Worth, Texas

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

For more letters on these and other topics, go to **www.computerworld.com/letters**

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InfoWorld Review, April 11, 2005

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SPECIAL REPORT GLOBALIZATION

02.20.06

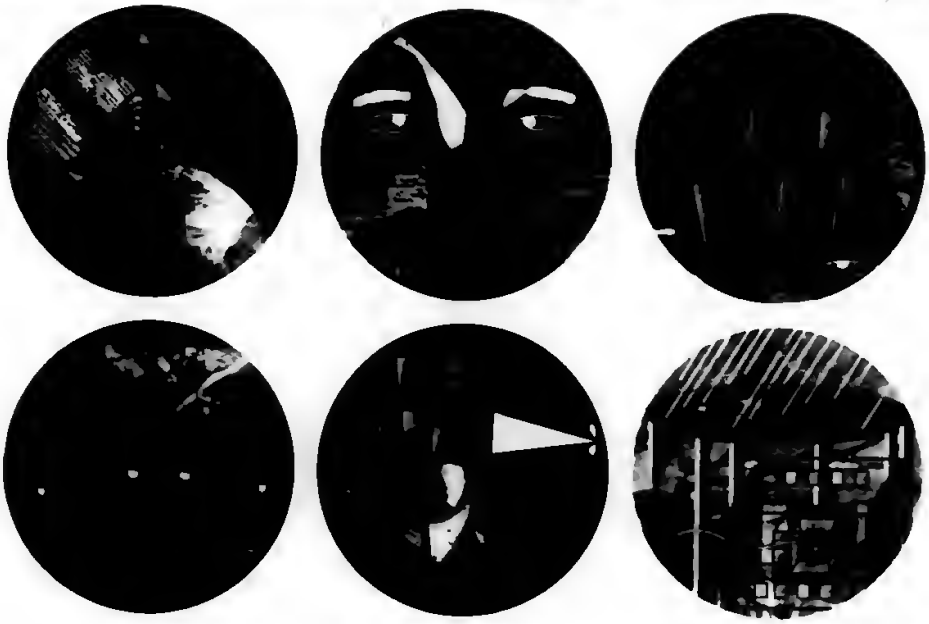
Balancing Act
Global enterprises need standard processes. IT pros like Pat Smith Fernandez of Stiefel Laboratories offer tips for creating equilibrium. PAGE 24

Global Gotchas
How to avoid hidden traps in international laws. PAGE 32

Blind Spots
Uncovering the holes in your global supply chain. PAGE ..8

CIOs (Should) Rule
On the global scene, a good CIO is a far better asset than a good CFO, says columnist Mark Hall. PAGE ..

LARRY BOODE



Navigating Global IT

IT managers at multinational companies must manage a surprising array of governance, legal, personnel and cultural issues – diplomatically.

"EUROPE is a [regulatory] minefield. You're probably breaking some rule." That was the blunt assessment of John Parkinson, chief technology officer at Capgemini, speaking at last year's Premier 100 IT Leaders conference. You know about Europe's strict privacy regulations (I hope), but how about labor laws that make it exceedingly difficult to fire or lay off employees? And did you know that, in France, Germany and the Netherlands, you must consult with powerful "work councils" before reorganizing or relocating employees?

This special report — with additional articles online at *Computerworld.com* — is full of "didja-knows" like that. For example, did you know the following?

- In Mexico, throwing documents on the table is considered highly offensive.
- In Taiwan, a signed contract isn't necessarily a final agreement.
- In India, it's better for an American to hire a local driver than to drive himself on the chaotic, congested roads.

Besides the cultural and legal issues of going global, there's the governance challenge of figuring out how much control headquarters should have when setting IT standards and how much should be left to foreign offices. Just getting everyone in various countries to use the same product codes for the company's consolidated finance and sales systems can be a big headache.

All of these topics and more are covered in this guide to global IT operations. We hope it will reduce the number of surprises you'll face — though it could never eliminate them all. ▸

Mitch Betts is Computerworld's executive editor. Contact him at mitch_betts@computerworld.com.

Top-down-driven standards and procedures will not get adopted. You need to sell, not tell [illegible] president of IT at Stiefel Laboratories

ANDREW TROFF/SILVER IMAGE PHOTOGRAPHY

Global enterprises need standard processes. Here are three approaches for creating equilibrium.

By Stacy Collett

Balancing Act

IT SEEMED like a reasonable request. Six years ago, Pat Smith Fernandez, corporate vice president of worldwide IT and MIS operations at Stiefel Laboratories Inc., directed every business unit in the company's 30 subsidiaries in six countries to use a common code in its financial and sales systems for each of its 2,500 products. Stiefel is a pharmaceutical company that specializes in dermatology.

It was the first test in a plan to globalize IT and business processes in a company that, until that time, had allowed each of its five geographic areas to do their own thing. Common global product codes would make it easier to consolidate financial information and product sales worldwide. But employees abroad didn't see it that way.

For starters, Stiefel's subsidiaries already had their own product codes. What's more, they didn't understand the value of the information that could be gleaned by consolidating financial and sales data. It took three years of forums and discussions to get the product codes consistently adopted worldwide, and it served as a valuable lesson for Smith.

"One thing I've learned is that top-down-driven standards and procedures will not get adopted," Smith says. "You need to sell, not tell, and the best way to sell is for them to own it."

These days, Smith takes a ground-up view of governance. She now sets target dates for adopting new standards and lets the IT staffers in each geographic area come up with a migration plan based on their own priorities. "Governance is now created by people who use it," she explains. "I haven't had any problem with adopting the standards at all."

Such is the balancing act of globalization. As more companies expand offices, distribution centers and manufacturing facilities abroad, IT executives are faced with the challenge and frustration of getting all employees around the world to do things the same way — from IT to business staffers.

Long-standing regional practices, executive politics and a lack of clarity about what the business is trying to accomplish are major roadblocks, according to Gartner Inc. analyst Susan Dallas, who says that about 60% of companies fail to create effective governance.

Too often, "senior management will say they want to be one company with one product line and synergy across the group. But they want local autonomy, too," Dallas explains. "They give no clear direction on what should be local, regional and centralized." In other cases, governance translates into CIO issues. "Senior business executives get bored with it because they don't understand why they're involved," she adds.

Dallas advocates a governance plan that gives more process ownership to each region while major platform decisions are made at headquarters.

Cheat Sheet

DOING BUSINESS IN THE PHILIPPINES

- **"The terrorist threat to American citizens in the Philippines remains high and the [U.S. Department of State] warns against all but essential travel to the Philippines."** – U.S. Department of State travel advisory, Jan. 25, 2006
- **Dress for hot weather. Light clothing is ideal year-round and essential during the hot and dry months from March to May. Temperatures average 78°F to 90°F.** – Philippine Department of Tourism
- **English is widely spoken in the Philippines, and most signs are in English. Filipinos are known for their hard work and relatively high standard of education.** – Business-in-Asia.com
- **Always accept any offer of food or drink. If you turn down offers of hospitality, your colleagues lose face.** – Kwintessential Language and Culture Experts
- **You will have to take several trips over a period of months before concluding your business dealings in the Philippines.** – ExecutivePlanet.com

COMPILED BY MITCH BETTS AND BOBBIE WILSON

Global vs. International

Large companies may claim to be "global" operations, but how do you spot the impostors? Some U.S.-based firms waving the global banner merely own autonomous subsidiaries worldwide, says Gartner analyst Susan Dallas.

"There are some companies that say they have one product set. Like Coke, for example – they absolutely, religiously guard that brand," which makes Coca-Cola a truly global company, Dallas says. "But they do recognize they need to go to market differently in different regions. That requires a different, sophisticated type of governance."

But some North American companies with a foreign presence might just have their names on buildings in, say, Singapore and Moscow. The various regional operations might sell some of the same products, but if each one is left on its own, with no common infrastructure or e-mail systems, "they wouldn't be considered global," she says.

The litmus test for Dallas: "How much are they really doing things in common, or how much does it feel like a collection of companies where the headquarters is just more or less a holding company?"

– STACY COLLETT

But some U.S.-based global companies have tweaked that model with success. Here are three different approaches to governance.

Headquarters-driven Companies

New York-based MetLife Inc. follows a headquarters-based governance plan for its main systems. The insurance company just completed a 16-country rollout of a standard product-illustration system for sales agents and a data entry system to capture policies at their inception electronically rather than on paper. All the information is captured in common databases in Singapore and Latin America. All global offices also use the same self-service portals from Brazil and automated underwriting systems from the U.S.

THE TENDENCY TO 'AMERICANIZE'

To arrive at these standards, IT staffers from each region collaborated to decide on the best technology. "Once that's done, it's cast in concrete. We don't change it," says Stephen Bozzo, MetLife's international CIO.

The governance plan works because IT leaders spent a lot of time abroad explaining what they were trying to accomplish, Bozzo adds. The local offices were also given direct accountability for managing several aspects of the project and providing business input.

Foreign offices have control when it comes to product decisions, such as whether variable universal life insurance software or pension software should be rolled out based on demand for the product, return on investment, time to market and regulatory issues. "That comes directly from the business, based on its own country's business plan, which is fully vetted in the U.S. as well," Bozzo explains.

So far, MetLife's governance strategy has been well received at its foreign offices, including those added last year after MetLife acquired Travelers Life & Annuity and its international subsidiaries known as City Insurance. "You need to collaborate, but not necessarily agree," Bozzo says. "Be a good listener early on, and make sure you truly are aware of all the concerns your partners have — not just colleagues, but the vendor community."

Regional and Local Say-So

Executives at FedEx Services Inc. lead the drive toward IT standardization in 220 countries, where 18 languages are spoken. But IT representatives from each of FedEx's five regions are "equal partners at the table" when decisions are made, says Don Gibson, managing director of IT at FedEx's office in Irving, Texas. "The regions have a lot of say-so when they have to deal with local IT regulations, laws and requirements."

Many regional best practices have been adopted as global standards. The company's European operation, for instance, manages language translation with software from Trados Inc., which was acquired by British company SDL International last July. Once a word is translated into Arabic, Chinese or Spanish, it's saved in a database to be automatically recalled for future translations.

"We've made that a standard at FedEx — across the company and FedEx.com for translations. We're already seeing some big savings," Gibson says. Software upgrades that once had to be translated into 18 languages each time at 10 cents to 20 cents per word can now be partially translated through the software. Only new words require translation.

The Hybrids

The Boeing Co. has employees worldwide, but it also has a complex web of global partners that provide services from aircraft design to construction of fuselages.

THE VIEW FROM GERMANY

Cheat Sheet

DOING BUSINESS IN THE U.K.

- U.K. tourist agencies provide a rating system for hotel and guest accommodations, including bed and breakfasts. Hotels receive between one and five stars; guest accommodations get between one and five diamonds. – i-uk.com
- Punctuality is essential at any business meeting or social event. – Communicaid Group Ltd.
- It is best to avoid meetings in July and August, which is when those with children are almost obliged to take their annual vacation. – ExecutivePlanet.com
- Humor plays an important role in business discussions; having a repertoire of jokes and anecdotes can be an asset, and good raconteurs should make the most of their talent. – ExecutivePlanet.com

COMPILED BY MITCH BETTIS AND BUDDIE WILSON

The aeronautics giant is undergoing a major transition to simplify business processes, including a plan to go from 3,100 systems to 500 common systems built around six lean business models.

"Our simplification strategy has been to make Boeing one global enterprise. That does not mean that one process fits all," says CIO Scott Griffin. Chicago-based Boeing still must work with the processes of its global partners.

"The Boeing simplification effort includes wherever employees work, but the model looks different because they rely heavily on partnering with companies around the globe. We're not asking them to change procedures," Griffin explains. But he adds that some partners have moved to Boeing's engineering design software voluntarily to make communication easier.

Dallas says that although regional governance is difficult to define, it will emerge as the dominant global model in 2006. However, "you'll see some pushback on governance initiatives because people in business units are failing to understand why it's important and why they should be involved," Dallas says. IT supports the entire organization, she adds, and "executives need to get involved because they can maximize their investment in IT or minimize the cost of IT."

Collett is a Computerworld contributing writer. Contact her at Stcollett@aol.com.

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THE TENDENCY TO 'AMERICANIZE'

North American-based companies are moving away from the idea that the American way is the best way to standardize processes, according to Gartner analyst Susan Dallas. But some global companies say that U.S. processes can be a powerful indicator of global success.

FedEx Services prefers to call it "evangelizing," not Americanizing, says Don Gibson, managing director of IT. "We take the global standpoint [that] what's good for the U.S. is also good for Japan or Europe."

He points out that some global decisions can be made based on parallels between European countries and some U.S. states. When looking at a product's return on investment, for instance, "the gross domestic products of Britain, Germany, France and Italy match up very closely to California, New York, Illinois, Texas and Florida," Gibson says. "People can build a case on concentrating sometimes more on U.S.[-led] globalization."

– STACY COLLETT

THE VIEW FROM GERMANY

"In a big global company like ours, there is an urgent need to make sure that we have standards in place. Otherwise, the communications and infrastructure just won't work," says Frank Buchner, vice president business development/IT at McDonalds Deutschland Inc. in Munich.

"On the other hand, there are many local requirements, such as payroll and taxes, where it's not possible to have everything standardized," Buchner says. "I think the key is to have a good mixture to make sure that you cater to the needs of the local country without breaking the boundaries of the global standardization."

– JOHN BLAU, EUROPEAN CORRESPONDENT, IDG NEWS SERVICE

Collett is a Computerworld contributing writer. Contact her at scollett@cadvan.com.

Culture Clash

Closing gaps between different worlds is crucial to building team trust.

By Mary Brandel

ANYONE who has ever worked on a global IT team has a culture-clash story to tell. For Rick Davidson, CIO at Manpower Inc., it was the time he and a male co-worker were waiting for an elevator in Japan, along with two Japanese female colleagues. When the elevator arrived, the men looked at the women as if to signal for them to enter, while the women — following their own culturally embedded rules of hierarchy that defer to men, especially male guests — simply looked back at the men. "The doors opened and closed, and no one got in the elevator," Davidson says. "When we realized what happened, we agreed to a compromise — they would enter first on the way up, and we would enter first on the way down."

And Fred Danback, vice president of global technology at a global financial services firm in Stamford, Conn., will never forget the time he started a meeting with his company's new Swiss acquisition by professing his two-year vision for the corporate IT infrastructure. When it was the Swiss staffers' turn, they not only presented their own technology plan, but they also backed it up with slides and architectural diagrams. "They probably already had the impression that Americans were an arrogant lot that would try to come in and steamroll them, and I probably met that expectation," he says.

Then there's the Indian firm that recently sent a greeting card to co-workers worldwide with the image of a swastika, an ancient and sacred symbol in that country. "Many people went ballistic," says Gopal Kapur, founder and president of the Center for Project Management in San Ramon, Calif. In fact, it took five managers hours of telephone conversations and many e-mails to calm the waters. The work of 14 international team members came to a halt for more than 11 days, delaying the project and costing thousands of dollars.

From the humorous to the offensive, from startling to subtle, there are an infinite number of misunderstandings that can arise when people from different cultures merge on a project team. And while some of these misunderstandings are obvious and surface quickly so they can be resolved on the spot, others are more difficult to detect, resulting in long-term trouble, like endemic mistrust among team members.

"You need to get beyond the superficial layer of what we think we know," says Lu Ellen Schafer, founder of Global Savvy, an international training and consulting firm in Palo Alto, Calif. "It's important to understand what's underneath the surface — why your e-mails aren't being answered, why people are telling us 'yes' when they mean 'no,' why there's silence on the phone during a teleconference."

Although the gaps can't be avoided completely, it's crucial to raise awareness of the cultural divide to build at least part of the bridge before you try to cross it.

Separated by Language

Because English is the international language of business, many misunderstandings are bred by the use of idioms, acronyms, slang and other sayings that are culturally specific. "You can imagine sitting in a meeting, and someone says, 'Give me a heads up when issues arise,'" Schafer says. "Everybody says, 'OK,' but when you ask them if they know what 'heads up' is, they say no."

While it's difficult to eliminate slang, companies should train global staffers to speak a "neutralized, denuded and precise English," suggests Erran Carmel, associate professor and chairman of the IT department at the Kogod School of Business at American University in Washington. So instead of "Let's wrap up the project by June," say, "Let's complete the project by June," he suggests.

There are also more formal approaches. At Sunterra Corp., a resort company in Las Vegas, Norbert Kubilus develops

Continued on page 28

Cheat Sheet

DOING BUSINESS IN HONG KONG

- **Much of Hong Kong follows a six-day workweek (Monday through Friday, plus at least a half-day on Saturday).**
- **Make appointments at least two months before your arrival in Hong Kong.**
- **Negotiations often take place over cups of tea. Regardless of how you feel, always accept an offer of tea.**
- **Don't assume that an answer of "yes" signals agreement. A more accurate interpretation may be "I heard you."**
- **Do not wear blue or white at social events; these colors are associated with death and mourning.**
- **Have business cards prepared with Chinese on one side and English on the other.**

– ExecutivePlanet.com

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a glossary for multinational projects containing industry-specific language that differs from country to country. Kapur suggests employing a documentation manager to search all documents for local nomenclature.

"IT terminology is relatively universal; however, this is not true for business terminology," Davidson says. For instance, in some countries, the word *deployment* is used to describe the user testing stage, not general release. To overcome that, Manpower has created an IT governance system dubbed "The Manpower Way." It describes the processes, methods and tools used to manage projects, people, assets, investments and budgets.

But sometimes it's nearly impossible to make an interpretation without being intimately familiar with the culture. Danback only recently realized that the British "cheers" means more than goodbye; it also indicates that the speaker feels the conversation went well.

And in India, when you ask when something is going to be finished, don't hold your breath when you hear "10 to 15 minutes," as Avi Huber, an Israeli software engineer who has worked in the U.S. for eight years, discovered. "It just means, 'We're working on it, and we think we have a solution,' " he says.

Israelis and Americans can have their own miscommunications. When a colleague of Huber's was called into his manager's office because of a big problem, the colleague responded with, "No problem!" Although it sounds blithe, the term is actually a direct translation from Hebrew that means, "I'll do whatever needs to be done," Huber says.

Glitches can even occur among speakers whose first language is English. "If a British person says, 'That's interesting,' it can actually mean he thinks your idea should be trashed," explains Jay Crotts, CIO at Shell Lubricants/B2B in London, part of Royal Dutch Shell PLC.

Americans are similarly guilty of not saying quite what they mean. For instance, two words in U.S. business-speak — "issue" and "challenge" — are actually code words for "problem" or "difficulty," but their loaded meaning would be lost on a nonnative speaker of English, Carmel says.

Eastern cultures can be even less direct, particularly when it comes to saying no. In Japan, the most negative response you would hear would be something like, "That would be difficult," says Mike Rosen, practice director at Cutter Consortium in Arlington, Mass. "We might interpret that as, 'Buck up and do it,' " he says. Similarly, in China, "We'll consider that" is a polite way of saying, "We'll allow you your opinion," Kubilus says.

Rules of Engagement

In the hierarchical cultures of Asian countries, guests and superiors are never corrected in meetings or teleconferences. Even if you asked, "Can we move ahead with this plan?" you might hear "yes," but that simply means you're senior to them and they can't push back, Crotts says.

In India, a "no" might sound like, "I'll try to get to it on Sunday," Schafer says. "Many people in Asia think they're preserving the relationship by giving us what they think is a soft no," she says. What can cause more confusion is that workers in India aren't culturally compelled to close the loop, because in their minds, they never committed to a time frame.

With so much room for misinterpretation, it's important to play it straight with both speech and body language. Keep your vocabulary basic, and avoid jokes, Rosen cautions, as they never translate. Don't use a lot of hand gestures — a thumb's up and the OK sign are obscene in places like Brazil, Australia, Spain and the Middle East.

"Since gestures have different meanings in different parts of the world, they can cause confusion," says Terri Morrison, president of Getting Through Customs, which provides books and seminars for international travelers. This is particularly true in "high context" cultures such as Japan, France and many Arab countries, where important information is transmitted in nonverbal or indirect ways, in comparison with low-context cultures such as the U.S., U.K. and Germany, where most information is transmitted verbally.

It may seem basic, but you should also speak slowly, since many in the audience may not speak English as their primary language. "We don't think of ourselves as having an accent, but when I ask people in India what is hard about communicating with Americans, they say accents," Schafer says.

Confrontation is also treated very differently throughout the world.

Continued on page 30

Cheat Sheet: DOING BUSINESS IN RUSSIA

- **Under Russian law, every foreign traveler must have a Russian-based sponsor (a hotel, tour company, relative, employer, etc.).** – U.S. Department of State
- **Hotels in Moscow are very expensive. The best way to book a hotel is through a travel agent in your own country.** – Outsourcing-Russia.com
- **Police have the authority to stop people and request their documents at any time without cause. Due to the possibility of random document checks by police, U.S. citizens should carry their original passports, registered migration cards and visas with them at all times.** – U.S. Department of State
- **Don't attempt to schedule your trip to Russia near the end of July or during the month of August, because this is the time of year many people take their vacations.** – ExecutivePlanet.com
- **Have your business card translated into Russian (with Cyrillic text). Include any university degrees you have earned.** – ExecutivePlanet.com

Cheat Sheet: DOING BUSINESS IN INDIA

- **Bring plenty of business cards, because people exchange business cards even in nonbusiness situations.** – ExecutivePlanet.com
- **More than 300 known languages are spoken in India, 24 of them by at least 1 million people each. English is the main language for business communication.** – Expatica Communications BV
- **Meetings often start with an offer of tea or coffee and snacks. It's courteous to accept the offer.** – ExecutivePlanet.com
- **Because of difficult road and traffic conditions, many Americans who visit India choose to hire a local driver.** – U.S. Department of State
- **Be prepared for last-minute changes in the time and place of your meeting. Leave your contact details with the secretary of the person you're meeting, so you can be informed of any changes.** – ExecutivePlanet.com
- **When meeting foreigners, Indian men will shake hands, but they don't generally shake hands with or otherwise touch women, as a gesture of respect for a woman's dignity and privacy.** – Indiaserver.com

The Scheduling Puzzle

One of the most daunting issues surrounding global teams is scheduling meetings that work well for people across multiple continents. With varying holidays, vacation norms and workweeks, not to mention time differences, it's a problem without a solution, according to people who have studied the issue.

"You can lessen its impact, but it's fundamentally unachievable," says Evan Carmel, associate professor and chairman of the IT department at the Kogod School of Business at American University. At one company Carmel worked with, there were only 50 days in the calendar year in which no one had vacation or holiday issues.

Consider that in some Muslim countries, Thursday and Friday are weekend days, while in Israel, Friday and Saturday are the weekend. "If you come up with an idea on Wednesday and would like to have a discussion, you can't talk until Monday," says Jay Crotts, CIO at Shell Lubricants/B2B in London. Workdays in the U.K. often begin at 9 a.m., while the U.S. might start at 8. And don't forget that just as the U.S. has daylight-saving time, certain countries in Europe change their clocks to abide by summer time.

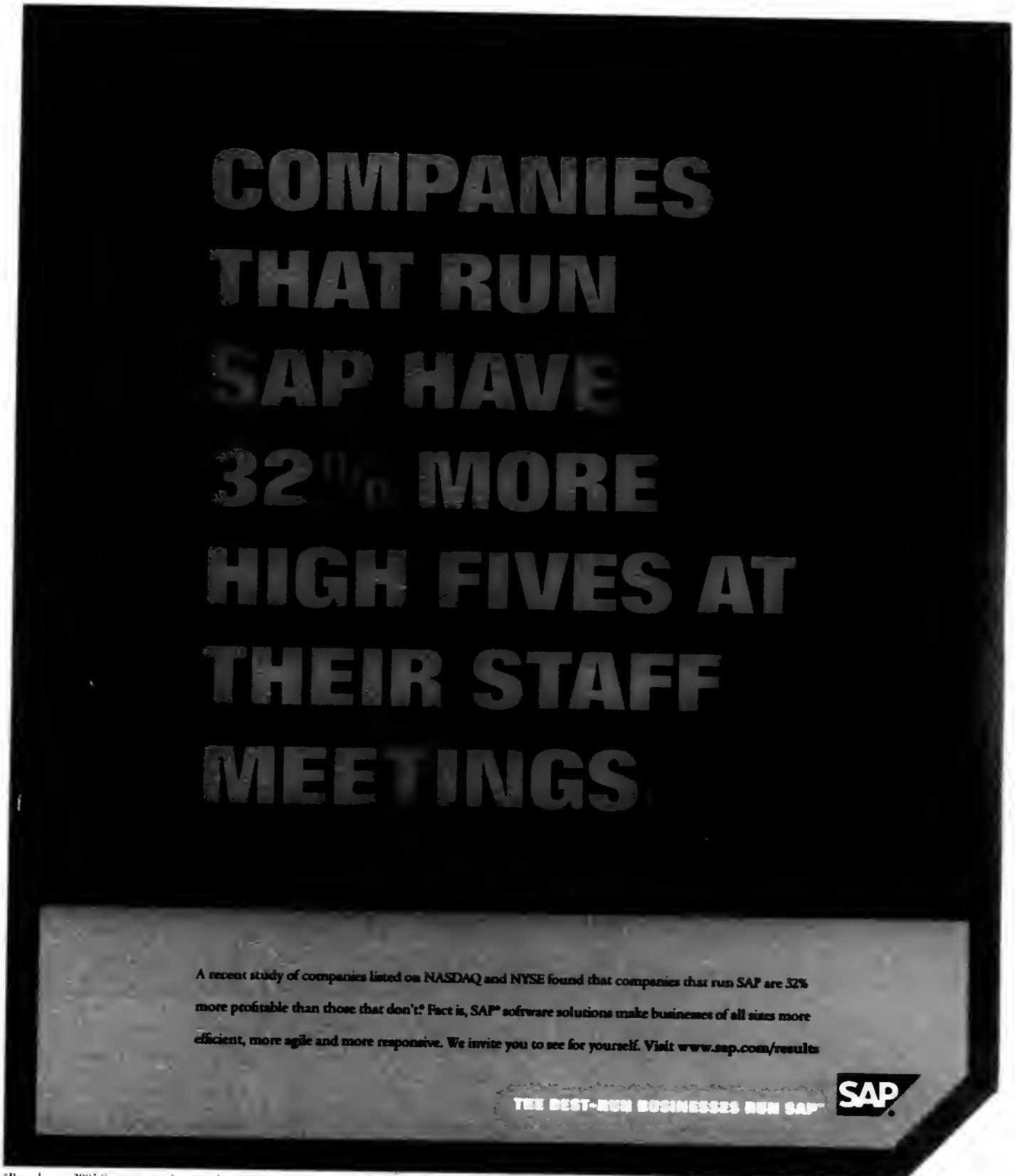
About the only way some companies resolve time-zone differences, Carmel says, is to expect people to stay up late at night or work early in the morning. "Small segments in the business have to make sacrifices, and in software, it's the onshore coordinators or project managers who get clobbered," he says. Crotts points out that when working with a company in Singapore, there are no overlapping hours, so if you're committed to communicating one-on-one, somebody has to work outside normal business hours.

To keep it fair, Crotts tries to "rotate the pain," and Shell has pretty much phased out videoconferences, since audioconferences make it easier to conduct business from home. "We bring our calendars together a year in advance – we don't want to consistently impact people's work and personal life," Crotts says.

Tracking various countries' holidays and religious observances is another challenge. During the holy month of Ramadan, Muslims won't consume food during daylight hours, which means you need to be sensitive about scheduling lunch meetings or all-day workshops where snacks are provided. And it's easy to overlook important national holidays, including July 4 and Chinese New Year.

Attitudes regarding scheduling vacations also differ throughout the world. "Here, you factor in two or three weeks of vacation, and you defer it until after a project is over," says Norbert Kubilus, CIO at Sunterra in Las Vegas. "In Europe, they'll plan to take off the month of August, and that's it."

– MARY BRANDEL



*Based on a 2005 Stratascope Inc. analysis of publicly available fiscal results of all non-financial companies listed on NASDAQ and NYSE

Don't Be the Ugly American

THE U.S. HAS A REPUTATION for not being sensitive toward other cultures, and according to many observers, that reputation is well earned. "Americans are not particularly adept at working globally," says Jay Crotts, CIO at Shell Lubricants/B2B to London. "They tend to make false assumptions about how people around the globe work."

Failing to fully understand the local culture may be somewhat excusable when you're just visiting on vacation, but when you're trying to collaborate with people in other cultures, it's good to at least be aware of how your behavior might be irksome or even offensive to other people.

IT'S ABOUT TIME

We all know about differing time zones, but it's easy to forget that ours isn't the dominant one. According to Fred Danback, vice president of global technology at a global financial services firm in Stamford, Conn., his European counterparts get upset when Americans schedule early-morning next-day meetings when it's late afternoon U.S. time. "As soon as they come into the office, they have to juggle their schedule to make it happen," he says.

Americans also use a different date convention than the rest of the world, which can confuse meeting scheduling. If we schedule for 1/6/06, for instance, many people would interpret that as June 1. At Sunterra, a resort company to Las Vegas, CIO Norbert Kubilus urges staffers to write out the month rather than using a number, to avoid miscommunication.

THAT'S MR. TO YOU

In U.S. business offices, Americans call everyone by their first names. However, in many countries, only "Mr.," "Mrs." and "Miss" are used, from the mailroom clerk to the CEO. People move to a first-name basis only when a formal invitation is issued.

But when Americans enter the room, "we often address everyone by their first names," Danback says. He has found that non-Americans are accepting of this tendency, but as soon as the Americans leave the room, they revert back to their own norm. "If you work with the culture on their terms, you'll be much more warmly received and trusted," he says.

CURB YOUR ENTHUSIASM

Americans value enthusiasm, but other cultures can interpret our "Great job!" incorrectly, believing we're more committed to something than we really are or, worse, that we're being patronizing and disingenuous. "The exclamation, 'Great idea, Juan!' can sound like a go-ahead to a colleague to Madrid," says Lu Ellen Schafer, founder of Global Savvy, an international training and consulting firm. "When Europeans realize there's no commitment implied, they might feel deceived or that the American is being superficial."

"At the fifth 'Good question!' they begin to feel it doesn't mean anything," Crotts says.

Avi Huber, an Israeli software engineer who has worked in the U.S. for eight years, says U.S. hyperbole has led Israelis to believe that we don't say what we mean. "When [Americans] say, 'I appreciate your opinion,' they often don't at all," he says. "An Israeli would say, 'That's bull, and this is what I think,' but with an American, it would take a long time to get to that point."

IT'S A BIG WORLD OUT THERE

A typical trait that irritates people in other countries is arrogance about our own culture, Crotts says, as though we think the U.S. is the center of the universe. To help dispel that image, he suggests being able to refer to current events, business examples and cultures beyond U.S.-based ones. "When you go to a new country, do you read *USA Today*, or the local newspaper?" Crotts asks. When you mention only to U.S. businesses and events in your conversations, it undermines your credibility. "In the U.K., they get 30 minutes of international news, whereas in the U.S., it can be 30 seconds," he says.

Rick Davidson, CIO at Manpower, agrees that Americans are seen as lacking in a global understanding of geography, history and politics. This is brought home to our tendency to overuse sports analogies when trying to emphasize a point. Examples that Schafer often hears include "Hail Mary pass," "ballpark estimate" and "slam-dunk." It helps, Davidson says, if you at least try to speak the local language. "If you're working hard to understand their culture, they're forgiving if you make a mistake," he says.

PRIMARY LANGUAGES

Because English is so widespread in the business world, Americans can be insensitive to the fact that many listeners are translating every word they say.

"We don't realize people are having a hard time keeping up with the conversation," Crotts says.

The trouble is, in many cultures it's considered impolite for people to say they don't understand what you're saying, so they won't ask for clarification. "That's why it's important to find multiple ways to describe or explain things and ask them to explain their understanding of what you just said," Davidson says.

This becomes particularly apparent in PowerPoint presentations, says Mike Rosen, practice director at Cutter Consortium in Arlington, Mass. Our tendency is to put very few words on a slide and then talk around those points.

"But when you're giving a talk to an audience without a great command of English, most people can read the language better than they hear it," he says. "You have to change the way you're giving the presentation so you have more content on the slide, it's readable, and you don't diverge from that content as much as you might in a typical presentation."

For example, Rosen might spend 90 seconds per slide in the U.S., but he increases that to two minutes per slide in other countries.

And remember, it's not so much about acting "less American," Schafer says. "It's about being globally competent – it's not changing who you are."

You'll find, Danback says, that because it's assumed Americans will impose their culture on the country they're visiting, if you make any effort at all to live by other people's rules, it will be greatly received. "You'll surprise and delight them," he says.

– MARY BRANDEL

Continued from page 28

Whereas workers in the U.S., Germany, the U.K., Australia, Scandinavia and Israel are comfortable vocalizing contrary opinions, even in the presence of superiors, Asian workers are less so.

"When Americans work with India, China or another Asian country, they make the assumption that people will speak up in a meeting or conference call — and they will if they're in a position of power," Schafer says. "But if they're not, our questions may be met with silence." For that reason, problematic issues should be discussed privately in one-on-one conversations. "Conference calls are good for disseminating information but not for discussions of what is not working," Schafer says.

The situation is quite different in Israel. Meetings there can involve lots of shouting, but "it's nothing personal — once it's over, everyone's friends again," Huber says.

And while Americans have no problem jumping into a business discussion as soon as a meeting begins, it's considered insulting in places like the Far East to begin negotiations before socializing and forming a relationship, even if that takes days, Kubilus says. Similarly, in collectivist cultures such as those of Spain, Italy and Latin America, it's important to build a relationship first and let that dictate where business decisions lead, Davidson says. "Individualistic cultures like in the U.K., the U.S. and Germany are more interested in getting the task done and building the relationship later," he says.

But unlike in the U.S., where relationship-building may happen as much in the office as outside it, Danback has found that in Europe, business offices are not considered social settings. In countries such as France, where people work strict 37.5-hour workweeks versus 50 hours or more in the U.S., "there's a time to socialize and a time not to," he says. For instance, lunchtime and right after work are more acceptable times for building relationships.

Cowboy vs. Engineer

Another area that can lead to mistrust is in the different approaches toward software development. Americans tend to take an iterative approach toward programming, which is part of what Rosen calls a "cowboy culture," while Europeans, particularly German and Swiss programmers, tend to be more rigorous and process-oriented and manage to a spec that doesn't change.

"They can get tremendously frustrated that we don't have details worked out ahead of time, and we might think

Cheat Sheet

DOING BUSINESS IN TAIWAN

- **Taiwan is subject to strong earthquakes that can occur anywhere on the island. Taiwan is also hit by typhoons, usually from July to October.** – U.S. Department of State
- **When doing business in Taiwan, you should never assume, as you might in North America, that a signed contract is a final agreement. In Taiwanese business culture, it is commonplace for negotiations to continue after a contract has been signed.** – ExecutivePlanet.com
- **Including an older person in your delegation is essential. This culture respects age and status, so sending a senior representative shows that your organization is serious about starting a business relationship.** – ExecutivePlanet.com
- **When you are paid a compliment during a conversation, respond by insisting that you are not worthy of such praise.** – ExecutivePlanet.com
- **Since the Taiwanese work ethic is exceptionally strong, be prepared to face 12-to-15-hour workdays.** – ExecutivePlanet.com

COMPILED BY MITCH BETTS AND DEBBIE WILSON

they've buried themselves in minutiae," Danback says. His firm has paired the engineering-oriented staffers with the more creative and iterative people.

Another approach is to compromise, Rosen says, and follow a formal process with standards and guidelines but with fewer steps than the Europeans might ordinarily incorporate.

These types of differences can even exist in the way people view meetings. In some cultures, people come to meetings prepared to discuss their opinions, having reviewed all materials and developed calculated positions, Davidson says. In other cultures, people expect meetings to be more spontaneous. "Setting expectations before the meeting regarding preparation and the desired outcomes can improve the productivity of the meeting and minimize the cultural friction that can occur," he says.

But the make-or-break factor for effective global teams is how well they collaborate. "You have to stop making assumptions that people understand what you mean and get some verification back to be sure they interpreted it correctly," Rosen says. Many people use collaboration tools such as WikiWeb from WikiWeb Inc. or Microsoft Corp.'s NetMeeting or Groove.

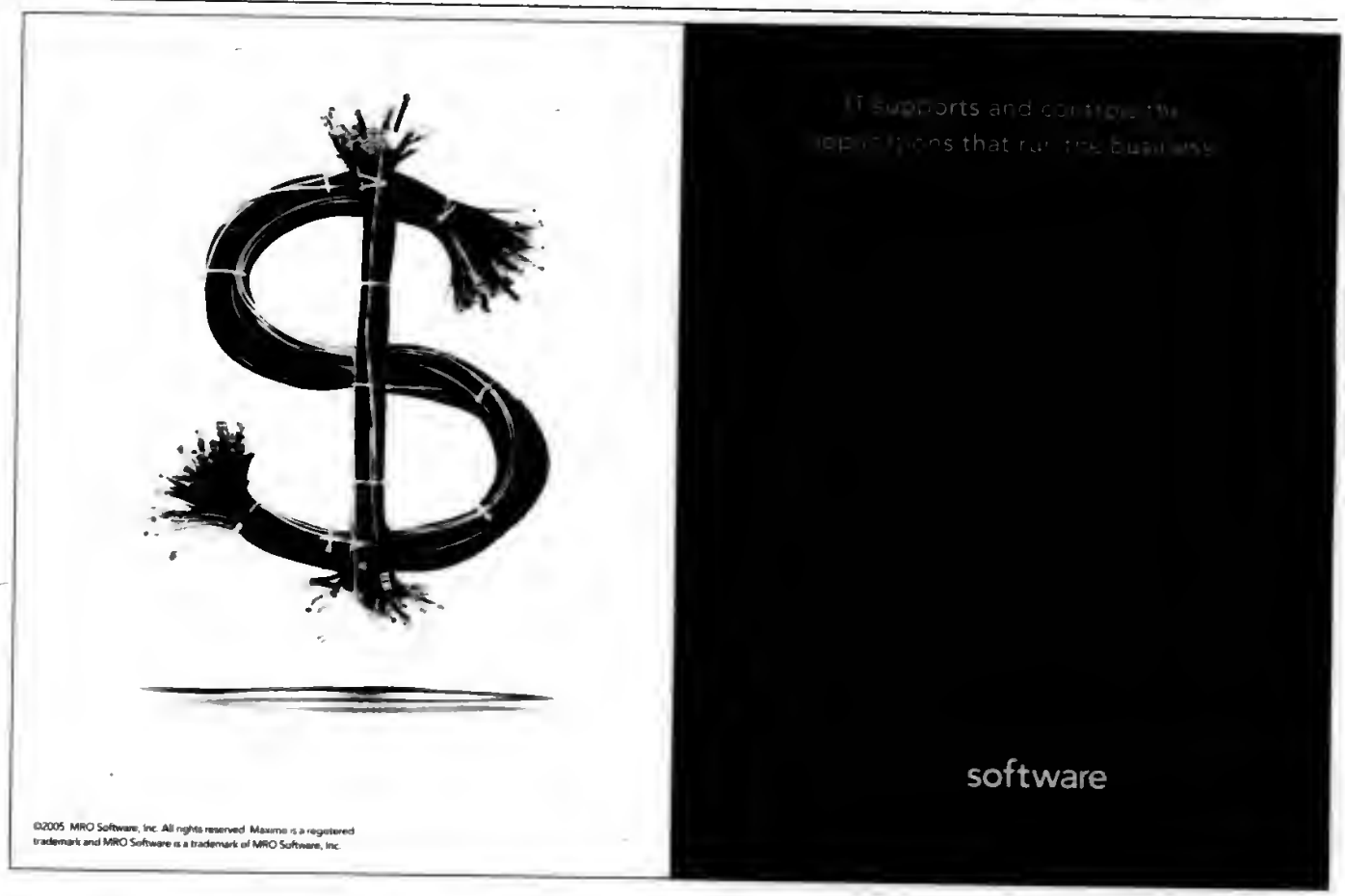
Schafer encourages lots of one-on-one communication in which people exchange instant messages while they are talking on the phone, since people are often better at reading a foreign language than listening to it.

And, of course, nothing substitutes for personal get-togethers. At Sunterra, Kubulis is kicking off a major project to migrate the company's European offices to a new enterprise system by getting U.S. process owners together with their European counterparts to create empathy between the two groups. "If I don't spend that time upfront, when I get to implementation, training and user acceptance, I'll be in trouble," he says.

It will also awaken people to the reality of cultural differences, because one of the biggest enemies of a well-oiled global project team is denial. "I often find people who say there are no cultural issues on their global teams, but I think it's because they don't associate the problems that crop up with cultural differences," Carmel says.

Indeed, says Crotts, "if you ever think you have the diversity journey figured out, you soon find there's another hill to climb or plateau to reach."

Brandel is a Computerworld *contributing writer. You can contact her at marybrandel@verizon.net.*



Global Gotchas

How to avoid hidden traps in international laws. By Mary K. Pratt

HERE'S THE strategy for expansion: Buy a competitor, and use its equipment and your own people to grow the business.

It's a straightforward plan, and one that's put into motion all the time. And although layoffs are an inevitable part of the transaction, dismissed workers rarely derail the plan — at least not in the U.S. But in Europe, where labor laws demand many more concessions from companies looking to shed jobs, they just might.

Such are the unexpected dangers of doing business around the globe.

Seasoned managers are well aware that laws and regulations vary from country to country, yet lawyers and IT executives acknowledge that there are some areas that can trip up even experienced pros. They range from navigating the nuances of labor laws to negotiating procurement deals. And although CIOs are reluctant to admit their missteps, experts say many companies discover legal traps only after they fall into them.

That's all the more reason to get a handle on potential pitfalls in advance, experts agree. "When you have a team around the world, you have to know exactly what laws you're dealing with," says Stephen Pickett, a CIO and president of the Society for Information Management.

Here are seven key areas to watch out for.

1 LABOR RELATIONS

Lawyers point to labor as one of the thorniest issues facing American executives working in Europe. And if you think only HR execs need to worry, you're wrong. CIOs who are downsizing or outsourcing could easily find themselves in tricky situations.

Melise R. Blakeslee, an attorney in the intellectual property, media and technology transactions group at law firm McDermott Will & Emery LLP in Washington, says one of her clients learned that the hard way.

The U.S.-based Internet services company bought a European counterpart, with plans to replace the European workers with its own. But the IT workers at the European firm quickly pointed to their legal rights, and in the end, the U.S. company had to hire some and pay off others.

Some CIOs are also surprised by the presence — and power — of staff or work councils, says Jay Crotts, an American who works in London as CIO

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Join Forces With Legal

IT EXECUTIVE Paul Krueger acknowledges that his talks with legal folks were rare 10 years ago.

"Now the conversations are happening quite frequently. The chief compliance officer is about four doors down from my office, so he knows where to find me and I know where to find him," says Krueger, the Houston-based CIO at Veteo International Ltd., a London-based supplier of products and services to the upstream oil and gas industry.

Krueger credits this open-door policy with helping him deal with the legal requirements in the 34 countries where Vetco operates. Working with other executives, Krueger's IT department has reviewed global e-mail retention policies, security and data protection needs, and corporate governance and compliance.

Vetco's proactive approach is admirable but not typical, experts say.

"It's very important today that the CIO be an integral part of the company's team of compliance people, but we find that they frequently aren't. Unfortunately, what happens in the real world is that companies discover this only when they have a problem," says Alan N. Sutin, chairman of the national technology, media and telecommunications practice at Greenberg Traurig.

CIOs who don't feel like they're in the loop need to cultivate relationships with the company's general counsel and compliance officers like Krueger did, experts say.

IT executives should also seek out experts in international law as well as counsel working in the countries in question. "The surprises come when they just consult the academic literature rather than speak to people on the ground," says Robert Zahler, a partner at Pillsbury Winthrop Shaw Pittman.

And CIOs must learn how to better time their requests for help and information.

Sutin says he sees IT departments that design systems or customize software thinking it will meet their needs, only to seek out lawyers or compliance officers at the last minute, "when changes to meet compliance are difficult."

"The single most beneficial thing that an IT executive can do," Sutin says, "is make sure a lawyer is involved from the early stages."

– MARY K. PRATT

Continued from page 32

of Shell Lubricants/B2B, part of Netherlands-based Royal Dutch Shell PLC.

"If you want to do a reorganization [or] downsizing or change the terms of their employment, such as location, you actually go to [the councils] with the request for advice," he explains.

Employee councils, which enjoy particularly strong legislative support in France, Germany and the Netherlands, can come back with support for a plan or questions about it. They can even delay action, Crotts says.

2 PRIVACY

European laws require much higher levels of data security and privacy, even as they apply to accessing employees' information. For CIOs familiar with only U.S. requirements, such restrictions may seem daunting.

"IT people are constantly surprised that their systems have to be adjusted to accommodate data protection, data transmission or other security issues," says Mark E. Schreiber, chairmao of the privacy group and a partner at Edwards Angell Palmer & Dodge LLP in Boston.

CIOs need to have systems that protect data and prevent illegal transfers of information, even within the company, Schreiber explains. For example, European privacy laws could prevent an HR official in France from e-mailing salary information to the CEO in London, even though such data-sharing is perfectly acceptable in the U.S.

Consider, Crotts says, that when compiling a list of its project people and their skills, his company first had to get employees to sign forms saying it was OK for their data to be used in such a manner.

3 PROCUREMENT

Blakeslee and her IT clients have learned that some clauses that are standard in U.S. contracts aren't much good elsewhere. So the protections built into legal lingo such as "liabilities," "trade secrets" and "confidential information" don't necessarily hold up in other countries, even if the words themselves are written into contracts.

For example, CIOs buying customized software overseas are often surprised to learn that the rights to software can't be assigned in some countries, so a vendor could legally sell that custom design to a competitor, Blakeslee says. So when she writes contracts for her IT clients, Blakeslee includes 99-year leases or noncompete clauses and explicitly spells out that the vendor can't sell the proprietary information.

"You can get where you want to be, but the language you rely on [in the U.S.] doesn't necessarily get you there," Blakeslee says. "The company really needs to think about, 'What do I need here?' "

4 DOCUMENTATION

Linguistics is hardly the ooly thing that can trip up IT leaders buying globally. Different standards in documenting deals can also be problematic.

U.S. managers are accustomed to keeping information about software licenses, contracts and proofs of purchase. Managers elsewhere aren't used to such data retention practices.

One of Blakeslee's clients discovered that foreign IT managers weren't documenting software purchases, which is necessary information for audits and to minimize the chances of buying pirated products.

"It's not just the audit issue," Blakeslee adds. "What if you get into a dispute with the vendor? What about contract negotiations? You need to know what the baseline is."

Without that paper trail, you're lost.

5 TAXES

"IT tends to buy a lot of goods and services, so taxes can be an issue for them," says Robert Zahler, a Washington-based partner at international law firm Pillsbury Winthrop Shaw Pittman LLP. That's because sales taxes and value-added taxes are addressed at the local level, even though such purchases could be deployed on a global scale.

CIOs can minimize taxes, though, by knowing when purchases can be charged to U.S. headquarters, Zahler says. Consulting services and software used companywide could he bought by the U.S. headquarters even if they are heing used at European sites. However, a system bought and used exclusively in Munich, for example, would be subject to local taxes.

"You need to get legal advice in each specific situation," Zahler says.

6 LEGAL SYSTEMS

Experts say that as outsourcing work to India and developing countries has gained ground in recent years, CIOs have begun to learn a valuable lesson about worldwide legal systems: They aren't equal.

"Many IT executives aren't focused on the issue of what legal remedies are available to them," says Alan N. Sutin, chairman of the national technology, media and telecommunications practice at Greenberg Traurig LLP in New York

And that's a problem when compaoies want to prosecute a worker for, say, stealing proprietary code or trade secrets. The legal remedies often aren't available because laws dealing with technology-related crimes in many countries aren't as evolved as they are in the U.S. and Europe, Sutin says.

India is in the process of amending its laws to deal with such crimes, and many outsourcing providers have improved their security, Sutin says. Still, companies that want to take legal action in India, China and elsewhere will find limited police resources and "a very long, very frustrating process" In courts, he says.

In making deals, CIOs need to list "technological requirements to minimize the problem," Sutin says. They should also look for outsourcing providers with U.S. offices, thereby giving them legal resources in U.S. courts should problems arise.

7 FRACTURED WORLDVIEW

IT leaders need to keep io mind that laws and regulations vary from country to country — even in uoified areas such as the European Union.

"There's a tendency to think that Europe is a region and it only has one law. But it isn't. It's much more a series of individual country laws with some codification. That really surprises even lawyers in the States," says Clive Davies, a London-based partner at law firm Oiswang.

This has led to fractured approaches that continually need adjusting from country to country. A typical CIO will implement a system that meets tbe requirements of the Sarbanes-Oxley Act in the U.S. and then broaden his view to similar requirements elsewhere, tweaking tbe system to meet local laws.

"There's a tendency if you have a U.S.-based multinational company to look at the States and see how that goes, and then they'll look at Europe and see how that goes, and then we'll look at the Far East," Davies says. "But it would be better for organizations to do these things on a global basis versus a regional basis."

Pratt is a Computerworld contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.

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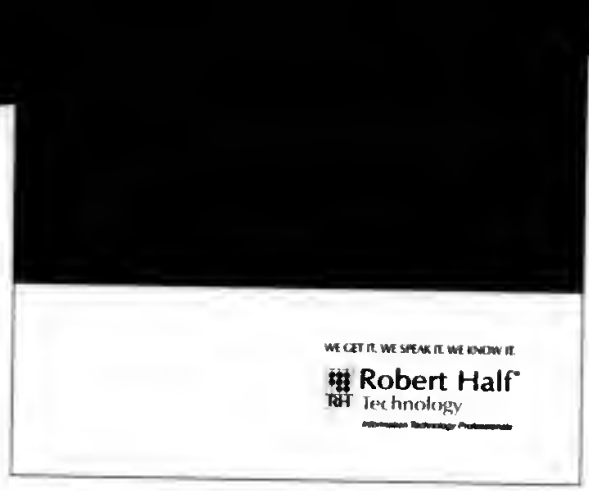

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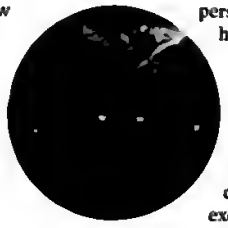
To lead an overseas IT outpost, a person must think locally to act globally, Ramakrishnan says.

Casting Call

The challenges of finding IT leaders to handle localization in far-flung regions.

By Jennifer McAdams

IT'S 1:30 A.M. in New Delhi, and a regional CIO of a major multinational corporation is flipping through résumés. He needs to fill several positions on his staff with the help of humao resources personnel and outside headhunters. They bave all dialed into a conference call initiated from the company's New York headquarters, where it is midafternoon.



The résumés before him boast impressive qualifications, yet this senior IT executive is leery. Perhaps he is an Indian expatriate recently returned to lead his company's New Delhi operations and thus realizes that experience listed on international résumés is often inflated. Or maybe he is U.S.-born but has rotated through enough global assignments to know that he must carefully scrutinize the applicants.

This scenario is typical across global corporations, which ofteo struggle to build effective IT outposts abroad. Chief among the challenges is finding top-ootch leaders competent enough to assemble qualified remote teams, bridge cultural differences between foreign IT workers and their U.S. counterparts, and coax these groups toward a set of work objectives that are almost always U.S.-centric.

The quest for qualified leaders to work overseas often starts witb a pool of expatriates who have settled in the U.S. but are longing to return to the countries of their birth. Now, however, more companies are growing international talent internally by dispatching promising junior executives from the U.S. to far-flung outposts.

Regardless of where the search begins, the goal is to find people who have a rare and desirable set of international management skills. "There are many complexities to working in the global eovironment," observes Alan Boehme, CIO at Juoiper Networks Inc. in Sunnyvale, Calif. Boehme's career has included more than 20 years of international stints at global corporations such as DHL Worldwide Express and General Electric Co.

"You always hear the phrase, 'Think globally, act locally.' Well, in tbis situation, a person must think locally to act globally, and things are done very differently in different parts of the world," Boehme says. "In addition to the huge differences in the language and educational systems, there are also so maoy differences in what a person in another country has learned and what is instinctive to that individual."

Going Home

Though not the only option, an obvious place to look for senior IT executives who can think across cultures is amid the growing number of foreign-born candidates who have been educated in the U.S. or otherwise steeped in U.S. culture but are amenable to moving back to their homelands.

"In many ways, the ideal solution and the first pool to look at is those expatriates who have lived in the U.S. for 10 to 15 years. These people are truly the product of botb countries," notes Umesh Ramakrishnan, vice chairman at executive search firm Christian & Timbers in New York.

SOURCE: THE CONFERENCE BOARD INC., NEW YORK, DECEMBER 2005

Less thao ideal, however, are those candidates who officially hail from another country but have resided almost exclusively in the U.S. "If the person falls short on in-couotry culture, that is disastrous," Ramakrishnan remarks. "On the other hand, if an executive is able to solve problems in his or her owo country but has trouble communicating with superiors in the U.S., in my mind, that is trainable."

Despite some difficulties in finding employees truly familiar with botb cultures, corporate hiriog officials and professional search firms are now looking at substantial pools of expatriates willing to exit the U.S. for the right opportuoity, according to Mark Minevich, executive vice president and cbief strategy officer of Enamics Inc., co-chairmao of the BTM Institute and co-author of a forthcoming book on globalization.

"We have seen that the movement of highly educated IT talent from developing countries to developed countries has had significant economic, social and cultural implications. Now it is io reverse, with IT talent returning to their homes io developing countries and creating new economic environments," Minevich observes.

To many expatriates wbo have grown used to U.S. lifestyles, however, returning to a developing country must he well wortb it. "There are a lot of practical considerations here. It is hard enough to get someone to move dowo the street, much less across the world,"

says Shawn Banerji, a recruiter in the technology sector at New York-based executive search firm Russell Reynolds Associates Inc.

Financial concerns are the chief reason a lot of expatriates will balk, Banerji says. "These individuals realize that replicating their executive urban or suburban lifestyle will be incredibly expensive, even in locations such as India or Asia," he says. "Forget that you get [several] rupees for every dollar; you've got to spend way more in India to get what we have here."

Look Inside

Given the limitations of finding enough expatriates willing to relocate and the expense of luring them abroad, many corporations are looking within for rising stars who might excel in foreign leadership posts. "I would advise corporations to try to grow as many of these executives as possible internally. There are many areas around the world that are growing so fast, and companies need to have people ready to step in," says Boehme.

Grooming international talent from within is a major strategy at ING North America Insurance Corp. in Atlanta. "We start a selection process by looking at a talent pool of individuals identified as high performers and screen their current and past performance, looking for early leadership indicators," says Jairo Orea, head of regional enterprise information integration at the company's office in Hartford, Conn.

Once identified, junior ING executives are transferred to international posts, where their management skills are carefully forged, Orea says. "There are many cultural changes you encounter when you start work on international assignments. These can create behavioral barriers. We have to give people time to digest the changes and coach them through successfully overcoming these barriers in order for them to excel in their initiatives," he says.

Indeed, more companies are realizing that once IT executives have matured through an initial tour of duty, many will be ready to take on leadership roles abroad, says Minevich. "Companies are leveraging long-term international assignments and then deploying those professionals full-time in emerging market locations," he says.

Molding global leaders by sending them abroad for extended periods of time is a strategy many corporations cited in a recent survey by The Conference Board Inc., a New York-based nonprofit research organization. Specifically, the most effective businesses use two-to-three-year rotations abroad to develop global leaders, who then move on to important posts abroad or participate heavily in identifying expatriate talent to head up these crucial positions, according to the Conference Board's December 2005 poll.

Whether groomed internally or plucked from the growing number of expatriates eyeing international jobs, the choice of a senior IT leader to dispatch abroad is critical.

Consider the CIO in New Delhi shuffling résumés on the New York conference call. "The hiring manager needs to understand the country he or she is working in. Without understanding the culture completely, you can easily be sold a bill of goods — résumés that dazzle. Often they are flashy because they are credentials a person has gotten from someplace else," notes Christian & Timbers' Ramakrishnan.

However, because dazzling résumés don't guarantee a sound IT group, corporate officials are wise to take their time searching and carefully consider potential candidates to lead teams abroad.

McAdams is a freelance writer in Vienna, Va. Contact her at Jjwriterva@aol.com.

India

THE BOOM in software development outsourcing to India by U.S. and European companies has created a shortage of technical manpower at user companies within India itself.

"India has a problem of plenty – plenty of IT talent and, at the same time, plenty of opportunities," said Sanjay Handu, director of strategic sourcing at Tyco Electronics Corporation India Ltd., the Indian subsidiary of Tyco Electronics Corp., a passive components maker in Harrisburg, Pa. "This means that finding talent isn't very difficult, but retaining it is," says Handu, who was head of IT at Tyco India until December.

Some companies manage the shortage by limiting their in-house software development, since developers are the most sought after by outsourcing companies. At Tyco India, for example, key applications are developed by a consulting team that draws on talent worldwide. Within India, the company primarily hires IT workers with more common skills, such as IT infrastructure and application maintenance, rather than core development skills, Handu says.

– JOHN RIBEIRO, IDG NEWS SERVICE

Ireland

PHARMACEUTICAL GIANT Pfizer Inc., which began operations in Ireland in the 1960s, recently chose the Emerald Isle as the launchpad for its worldwide financial system deployment. Yet finding experienced IT workers in Ireland to support the project has been a challenge, says John Larson, project leader and vice president of IT for corporate finance at Pfizer. Larson, an American based in Dublin, manages about 300 people, 100 of whom live in Ireland. "There's a lot of demand for that talent," he says.

The current hiring pinch is a dramatic change from the 1980s and 1990s, when IT jobs in Ireland were hard to find. A recent study by Dublin City University found that during the last seven months of 2005, IT job vacancies in Ireland increased by 14%.

In particular, Larson is struggling to find employees to fill higher-level IT positions. Because their skills haven't been in great demand in Ireland, many high-level IT professionals leave Ireland to find work in London or the U.S., he says.

Another challenge is obtaining the necessary visas for Indian workers to come to Ireland for training. "We're finding that the visa and approval system for bringing in people who [the government] views as competing resources is burdensome compared to other places we work, like the U.S. or the U.K.," Larson says. "It takes a huge amount of time, and it's a lot of bureaucracy."

Another problem is retention, he says. According to United Nations figures, Ireland has the youngest population in Europe. "Because it's a young population, there's a lot of job hopping that goes on," says Larson. IT workers are on the lookout for the best pay and travel opportunities, and they don't hesitate to move around to find the best offer, he adds.

Indeed, many IT workers are switching jobs every two to three years, says Alana Conroy, a senior IT recruitment consultant at Rescon IT, a placement company in Ireland. And those moves are paying off. Most IT workers who changed jobs in Ireland in 2005 received 10% to 20% increases in salary, Conroy says.

– NANCY GOHRING, IDG NEWS SERVICE

Scouting Talent Outside the Big City

TO TRACK DOWN expatriates or other promising executives willing to take on global assignments, internal search committees and hired headhunters are scouring less-known pools of talent.

One strategy is to think beyond the biggest cities or most obvious locales in a particular country when working with local agencies to place senior IT executives, says Alan Boehme, CIO at Juniper Networks. "Some large corporations are now looking in smaller cities for talent," he says, citing Pune, India, as an example.

Bear in mind that India and East Asia aren't the only options, Boehme adds. "There is some unbelievable technical talent in the Eastern Bloc," he says.

Managerial talent abounds in places such as Australia, suggests Shawn Banerji, executive director at executive search firm Russell Reynolds Associates. "Australians tend to crop up in different parts of the world. They are a pretty adventurous group that is fairly open-minded and global in their views."

Other countries likely to yield strong IT managers capable of global assignments include Israel and Singapore, according to Mark Minevich, executive vice president and chief strategy officer at Enamics Inc.

Academia is another place to look for executive-level IT talent, says Umesh Ramakrishnan, vice chairman at executive search firm Christian & Timbers.

"These candidates tend to have cultural and geographical strengths, though they do lack industry experience. Still, that can be less risky in a technical setting, especially if this person is running a purely technical shop or research and development staff," Ramakrishnan says.

Also, consider exploring Washington's government technology industry or the IT talent pool around the United Nations in New York as additional options, advises Banerji.

–JENNIFER McADAMS

Blind Spots

Uncovering the holes in your global supply chain. By Gary H. Anthes

LARRY ROSS

U.S. COMPANIES are increasingly extending their operations overseas, looking for new markets, lower labor costs and better access to raw materials. Such expansion can bring advantages, but it can also introduce critical blind spots into supply chains as business and IT managers try to monitor activities thousands of miles away.

This lack of visibility can take many forms: Will we receive that shipment of repair parts in time to keep the U.K. plant running? Why hasn't that Italian customer received his order? Why do we seem to have too little inventory in our Ukraine warehouse? Why is the latest EDI transmission from Mexico missing data? How can we be sure that our Malaysian subcontractor is meeting our quality standards?

Companies attempt to enhance global supply chain visibility by a variety of means — integrating stovepiped systems, employing technical tools such as dashboards and alerts, outsourcing some supply functions and even resorting to manual systems. Technology is important, they say, but often what's needed is just better management.

AMI Semiconductor Inc. in recent years has subcontracted out an increasing amount of manufacturing and assembly work, mostly in Asia. The resulting partnerships, some 60 of them, have helped it cut costs and cycle times but have hindered supply chain visibility, says Roland Smith, director of information services at the Pocatello, Idaho-based chip maker. As the company has outsourced more of

Continued on page 40

STUMBLING BLOCKS

It's difficult to get a clear picture of cash flow, inventory, and hard and soft financial commitments

Financial and risk management systems aren't up to the complexity of global trade

The complexity of international transactions is placing stress on internal skill sets

There's a decentralized organizational approach to global trade

BASE

SOURCE: ABERDEEN GROUP INC., BOSTON, SEPTEMBER 2005

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Global Stovepipes

WHILE A FEW companies, such as Procter & Gamble, have facilitated supply chain visibility by standardizing systems across the globe, many companies still operate with stovepiped systems.

NCH Corp., an Irving, Texas-based supplier of industrial maintenance products, has four factories and 26 sales offices in Europe. But when it makes a product in the Czech Republic for delivery to a customer in France, for example, it must first ship the product to an NCH warehouse in France and then to the customer, rather than directly to the customer. And if something happens to the shipment en route, it could take days to track it down. The reason is that NCH has separate, stand-alone systems in each of its 26 markets.

"It's difficult to have visibility for planning in one place and to tie together all the events in the supply chain," says Chris O'Connor, chief operating officer for Europe. But he says NCH will move to a single, integrated system using Oracle Process Manufacturing and Oracle Advanced Supply Chain Planning. The rollout is expected to be completed in about 12 months.

In a parallel project, NCH will outsource warehousing and customer delivery operations to Koninklijke Frans Maas Groep NV. The new Oracle Corp. systems will interface with Frans Maas' systems via electronic data interchange to give visibility into the supply chain end to end, O'Connor says. Then it will be possible to make shipments and trace them directly from a factory in one country to a customer in another.

– GARY H. ANTHES

Continued from page 38

its manufacturing operations. Its customers have demanded more and more detailed information on quality and tests, he says.

"The need for data from subcontractors has grown dramatically," Smith says. "We have our own data formats, and very seldom do they match up with the formats in our subcontractors' systems," especially systems in less-developed countries.

However, China, where AMI's business is growing fastest, presents unique standards issues, Smith says. "They are on the leading edge of technology. They are really heavy into XML, for example, but most of our other suppliers couldn't care less about XML. As far as China is concerned, EDI doesn't exist. We have found we have to accommodate some of this in our systems," he says.

To help with the interfaces, AMI turned to Trading Grid services from GXS Inc. in Gaithersburg, Md. GXS scrubs and harmonizes intercompany data flows, automates the production of advanced shipping notices and other transactions between AMI and its subcontractors, and provides status information on shipments in transit.

Still, getting quality data and test results from some of AMI's overseas subcontractors can be "problematic and unreliable," Smith says. "We want them to FTP it to us, but some want to e-mail it to us or do other kinds of funny things."

"Funny things" can include not being completely truthful about the results of the quality testing the subcontractor has done, Smith says. "In some parts of the world, folks get pretty inventive," he says. "It's partly a matter of making sure we collect the right kinds of data in order to highlight where there may be a compliance issue."

Smith says his staff has developed a set of IT standards and criteria for evaluating potential overseas subcontractors, but it hasn't always been easy to get business unit managers who negotiate with suppliers to apply them faithfully. "There have been some horror stories when price has become the only objective," he says.

Even the most basic communications can be problematic. E-mail worked just fine for AMI in the U.S., but time zone differences meant that a message to an Asian supplier could sit unread for hours overnight, and the reply might go unread for hours more. "We could go three or four days having a very simple conversation before we got to the real question," Smith says. AMI put in a BlackBerry infrastructure so that key engineers could be reached off-hours when technical problems arose on the other side of the globe.

Virtual Trucks

One way to sidestep some of the challenges presented by global operations is to have global standards — for systems, processes and procedures, says Alfonso Cos, vice president for global supply network solutions at The Procter & Gamble Co. "There's a big difference between being a global company because you have operations in many countries and being global because you operate globally," he says. "A few years ago, the company moved away from country-by-country operations to really operating globally."

Among other things, that required a four-year project to standardize on a single software vendor — SAP AG — for manufacturing systems at 135 plants in 40 countries. At the same time, P&G moved to integrate its IT organization. "Instead of having IT groups by business unit or region, we brought all those IT groups under a single organization called Supply Network Solutions," Cos says. "We run all the systems that plan, make, pack and ship finished product around the world. So one way to ensure visibility is with the system infrastructure. The other is the organization infrastructure."

P&G's system standardization made it a lot easier to put in visibility tools such as dashboards, which connect multiple supply systems, Cos says. The dashboards, which he calls "supply network cockpits," currently extend to P&G's manufacturing facilities but will eventually span the entire supply chain, he says, from raw material purchases to customer deliveries.

The dashboards give views into the supply chain at whatever level is appropriate for the user, from a foreman in a Pampers plant in Cologne, Germany, to a business unit manager at headquarters in Pittsburgh. "You can see, by SKU, the orders, production plans and actual production in various stages," Cos says.

The dashboards — which were custom-developed by P&G — can look at higher levels as well, and back in time. For example, a user could ask to see demand forecasts for a product across multiple countries and periods. "You can see which ones are red and which are green in terms of the forecasting accuracy," Cos says.

Supply chain visibility means more than just giving internal users the information they need. P&G developed its Supplier Portal to let suppliers — 100,000 worldwide — peek into its production schedules. They can also use the portal interactively to resolve shipping issues and other problems, Cos says. Users are aided by virtual trucks and cases that move around on the screen.

Window to the World

As at P&G, system dashboards are a key visibility enabler at London-based Shell Lubricants/B2B, a unit of Royal Dutch Shell PLC. "The dashboards answer the question, 'Are customers getting what they want, when they want it?'" says CIO Jay Crotts. But he declined to discuss the content of the dashboards, saying the tools give Shell Lubricants a competitive advantage.

"The challenge is what the local expectations or laws might be," Crotts says. "How do you collect cash in countries where electronic payments are not even thought of? You might say 30 days is normal [for paying bills], but in some countries, it's 60 or 90 days. It's unbelievable the variances you get."

Crotts says a company must be realistic about what it can accomplish with technology and how far it can force disparate cultures, business practices and legal structures into the rigid molds that systems sometimes require.

"If you think you'll get it absolutely perfect, you are fooling yourself," he says. "Having manual work-arounds has to be an acceptable option. It really requires executive sponsorship to ensure that the passion for standardization doesn't go so fast that you miss the market or miss your customer's expectation." ▸

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Creating a shelter for data in a dangerous world.

By John S. Webster

IF IT SEEMS that the world has become a more dangerous place for sensitive organizational data over the past five years, that's probably because it has. As natural disasters, terrorism, disease and social unrest have threatened to affect staffing in various parts of the globe, the business continuity plans of many organizations have had to become heavy on the disaster recovery side.

Such safeguards become critical when companies extend their data infrastructures overseas. Catastrophic events such as the 2001 terrorist attacks in the U.S. have forced IT managers to make disaster recovery a priority. At Advance Transformer Co., a lighting manufacturer in Rosemont, Ill., and a division of Philips Electronics North America Corp., the attacks were a wake-up call, says CIO Julius Tomei.

"The federal government shut down airports and closed borders, which imparted to us, like all companies, the importance of disaster recovery," he says.

Tomei isn't alone. In a November 2005 survey, Gartner Inc. found that North American IT managers are more than redoubling their data backup and replication processes, in large part because of natural disasters such as last year's Hurricane Katrina in the U.S. Other global threats to business operations, such as the December 2004 Asian tsunami and the SARS epidemic in 2003, got the attention of disaster recovery planners as well.

In 1999, Advance, which has engineering and manufacturing facilities in the U.S., Mexico, Southeast Asia, the Netherlands and Brazil, contracted Hewlett-Packard Co. to provide business continuity services, including disaster recovery. HP set up a data recovery center, currently located in Pennsylvania, that replicates the hardware and software in Advance's Rosemont data center, creating a "low-level layer of our environment," says Tomei.

Twice annually, Advance tests its disaster recovery infrastructure and processes by running its Unix applications in the HP service center. For ongoing data backup, Tomei works with IT staffers at outlying global locations to determine which data should be transferred to the central data center and how often.

Who Owns Business Continuity?

When an organization's IT infrastructure extends across national borders, business continuity plans grow more complex. Staff management, local regulations and the location of data centers all come into play in a global company's business continuity plan.

First and foremost, management must decide how to coordinate a business continuity plan infrastructure — not just hardware and software, but also employees who might be affected by disasters. IT assets and data may be geographically scattered, but someone still has to be in charge of the plan, and that person shouldn't be the CIO, says Dan Bailey, senior manager at Protiviti Inc., a Dallas consulting firm.

"Thinking about disaster recovery on the level of a CIO is certainly appropriate. But if disaster recovery in its own right is strictly an IT function, you're only recovering all of IT. You're not recovering HR, accounting and other departmental applications," says Bailey. "From a global perspective, for overall crisis management and business recovery, all the potential impact is on the business side."

For that reason, managers in financial or operations departments can be more effective leaders, because those are the areas of business that get affected by data disruptions. "[Business continuity plan] ownership is very ineffective from IT," Bailey says.

At The AES Corp., a $9.5 billion global energy firm in Arlington, Va., IT managers are implementing companywide business-continuity standards to ensure that power generation and distribution facilities located in far-flung places such as Cameroon, Pakistan and Panama stay up and running during a crisis.

According to CIO George Coulter, passage of the U.S. Cyber Information Security Act, which is part of the Department of Homeland Security Appropriations Act of 2005, inspired the IT group to put global standards in place. The company set up data centers in Europe and the eastern U.S. and a global WAN connected with fiber to provide real-time load balancing.

With 70% of its business outside the U.S. and 135 businesses in all — including 124 power generation businesses, nine distribution businesses and 15 million customers worldwide — getting everyone on the global WAN and conforming to companywide business-continuity standards wasn't easy, says Coulter.

"It's extremely challenging, but we treat all businesses with the same standard," he says. "With the data centers in place and the global WAN, we don't have to worry about in-country problems, even in areas like Cameroon. Business by business, we connected them to the data center, and those problems go away."

Coulter says AES chose the data center sites not because they're in relatively stable global regions, but because they're on the 311Mbit/sec. fiber backbone used by AES's network infrastructure provider.

"You can't get this kind of bandwidth in Brazil, for example. With the data centers on two different continents, each with its own network links, we have a reliable, robust architecture and built-in redundancy," says Coulter.

Staffing Matrix

AES's IT staffers are geographically dispersed. To ensure that various units conform to standards for business continuity, all 45 of AES's distribution centers have full IT staffs, including an IT leader who reports to an IT council.

With power distribution businesses worldwide, Coulter's staff spends a lot of time working with idiosyncratic local government agencies that oversee utilities. In fact, he has a staff dedicated to the task. "In our business," he says, "it's a full-time job to work with local authorities."

In addition to local IT leaders, global companies must have one person who oversees business continuity and disaster recovery, says Protiviti's Bailey. "Should you have foreign IT locations? The answer is an absolute yes, but how do you coordinate them? From a business-practice continuity perspective, there should be a single, overarching point person," he says.

This person should have responsibility for managing the disaster recovery process and ensuring that the three core elements of corporate business continuity management — crisis management, business resumption and disaster recovery — are met, in part through regular evaluation and testing, says Bailey.

"Each business unit should also own a recovery plan," he says. "One owner couldn't go in and know how that unit worked. The person managing the process, steering the ship, has to make sure people are in compliance with the overall plan."

As an IT infrastructure gains new hardware and software and as the business grows, evaluation of disaster recovery is crucial, says Advance's Tomei.

"We continually review and look at our disaster recovery plan to take into account how we can be better prepared," he says. "A disaster recovery plan is a living, breathing document. It's part of what we do."

Webster is a freelance writer in Providence, R.I. Contact him at john.s.webster@verizon.net.

THE SARS EFFECT

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2	China	8	Chile
3	Malaysia	9	Canada
4	Philippines	10	Brazil
5	Singapore	11	U.S.*
6	Thailand	12	Egypt

*San Antonio

SOURCE: A.T. KEARNEY INC.'S 2005 GLOBAL SERVICES LOCATION INDEX, NOVEMBER 2005

Filling the Pipeline

What companies are doing to develop a stronger global leadership pipeline:

Base: Survey of 81 corporations; multiple responses allowed

SOURCE: THE CONFERENCE BOARD INC., NEW YORK, DECEMBER 2005

Europe's IT Priorities

The top five IT infrastructure-adoption plans in Europe:

1	Significantly upgrading security environment
2	Consolidating IT infrastructure
3	Upgrading business continuity capabilities
4	Replacing or upgrading PCs or laptops
5	Upgrading systems management capabilities

Base: 305 infrastructure decision-makers at European organizations

SOURCE: FORRESTER RESEARCH INC., CAMBRIDGE, MASS., DECEMBER 2005

MARK HALL

CIOs (Should) Rule

CHIEF FINANCIAL OFFICERS HAVE TOO MUCH CORPORATE POWER. CIOs have too little. This is especially true among global organizations, where a good CIO is a far better asset than a good CFO.

There. I've said it, and I feel better. You should start thinking it too, if not saying it aloud.

Far too often, CIOs, apparently afflicted with a surplus of humility, strive merely to be on par with CFOs. We see stories, such as the one that came out of last year's *Computerworld* Premier 100 IT Leaders conference, quoting CIOs in different industries arguing that companies should put their CIOs on the same level as their CFOs (see "IT Leaders See Need to Be on Par With CFOs," March 14, 2005). And in their article "Decoding the CIO-CFO Relationship," Deloitte Consulting's Ann Senn and Kenneth Parrillo seem convinced that the perceived tighter collaboration between the two executive levels should be seen as progress for the CIO. And not without reason, if results from *Optimize* magazine's annual survey are true. Last year's poll showed a steady climb in the number of top IT executives reporting to the CFO — up from 8% in 2003 to 22% in 2005. You almost get the idea that a CIO should be happy if the CFO remembers his name.

Frankly, CEOs of global businesses who put their CFOs over their CIOs are hurting their companies and often themselves. And I, for one, would think twice before investing in companies run by such short-sighted management.

One Strategist, One Implementer

My proposition is simple: The value of a CIO expands exponentially as an organization grows operations overseas. On the other hand, CFOs lose their value as a company goes international.

Generally speaking, a CFO's most prized trait is his ability to count money in ways that are most favorable for a business (and hopefully legal, too). That means CFOs are well versed in tax-avoidance strategies, revenue-recognition policies, optimized audit procedures, balance sheet preparation, cash management and other skills that are ideal for controlling costs and squeezing profits from revenue. Without skills like those, a CFO might as well be just another CPA.

However, most of those skills are based on the specific accounting rules and tax laws within a particular country. With very few exceptions, when a company moves some operations overseas, CFOs outsource those skills to locals. That's because the financial laws of each nation differ, so what works in one country doesn't necessarily work in another. If the board of directors decides that expanding abroad is essential to growth, CFOs must defer to others. Your top financial strategist becomes as much an advisee as an adviser when it comes to global issues. In other words, when he's talking about the way to manage money overseas, he's spouting secondhand information.

On the other hand, a CIO for an international company need not defer to anyone else when it comes to defining and executing a technology strategy to support the business.

Technology knowledge, unlike financial acumen, is truly international. A CIO can create business opportunities for global operations by implementing technology strategies that create or improve a worldwide supply chain, multinational product distribution system, international customer communications technology and even financial systems to support the needs of virtually any nation where a company wants to do business.

One other point: In all the major business scandals that have hit the fan in the past five years, I can't recall a single CIO who's been fired or indicted, let alone one who has copped a plea or been sent to the slammer. But CFOs at Boeing, Enron, Tyco, WorldCom and many others have all been at the center of corporate messes. Of course, most CFOs aren't crooked, and dealing with money is inherently more corrupting than tinkering with technology. But there's something else at play here.

A CIO by nature thinks about his role in a global context and, to my mind, makes a better top executive than a CFO. It's time for CIOs to shed their timidity about seeking parity with CFOs. In fact, I think it's time the CFOs started reporting to CIOs.

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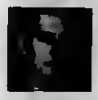

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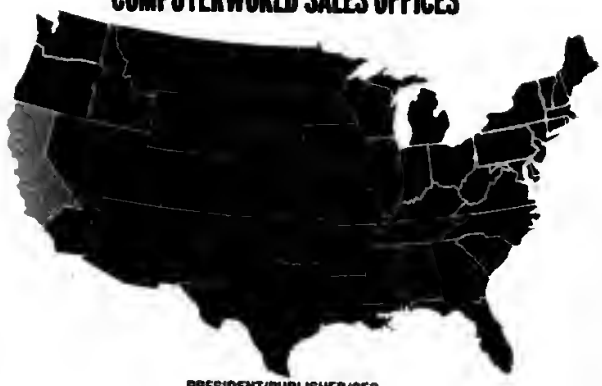

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N.Y. Suit

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Kim added, though, that the U.S. Department of Justice would rather negotiate a settlement with New York officials than go through "costly and protracted litigation."

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The board is discussing the status of its efforts with the DOJ, the spokesman said, adding that the state was delayed in starting HAVA projects while it waited for the New York legislature to create vendor certification processes and other rules. The legislation was finally passed last July.

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The state could be forced to return some of the $220 million it has received for HAVA compliance work if the requirements aren't met.

A DOJ spokesman declined to say what penalties might be imposed on New York or to offer any further information on the matter.

New York Not Alone

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Based on his experience in the state of Washington, Reed said, the DOJ has so far been encouraging progress rather than imposing penalties. ▸

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Leon County Elections Commissioner Don Sancho said he is currently in talks with two voting systems vendors and may reapply for the grant money once a contract is signed.

At the same time, Sancho said the county will get the gear whether the grant is reapproved or not. "We have over $1 million in the elections budget for new equipment. Money is not the issue in this debate," he said.

It will be up to the Florida legislature to decide if Leon County will once again be eligible to receive the funds, said a spokeswoman for the secretary of state.

Leon County was one of two of the state's 67 counties to lose its grant money, she noted.

The loss of the expected funding was the latest in a series of setbacks for Leon County in its effort to comply with the Help America Vote Act.

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In the meantime, neighboring counties have promised to supply Leon County with equipment for any emergency elections.

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Feds Say Kumar May Have Erased Evidence From Laptop

BY NANCY WEIL AND TODD R. WEISS

At the upcoming trial of Sanjay Kumar, prosecutors will present evidence that the former CEO of Computer Associates International Inc. erased data from his laptop PC that was potentially material to the accounting fraud case against him, according to a court document filed this month.

The document, which was filed Feb. 2 in U.S. District Court in New York, is a letter from the local U.S. attorney's office notifying Kumar's lawyers of a plan to call two expert witnesses to testify regarding the alleged destruction of possible evidence. The letter claims that Kumar reformatted his laptop to run Linux after the government started investigating CA in 2002.

Kumar left the company, which is now known as CA Inc., in June 2004 and was charged with securities fraud and obstruction of justice later that year. His trial is scheduled to begin on April 24.

According to the U.S. attorney's letter, David Burg, a consultant at PricewaterhouseCoopers who specializes in "forensic technology solutions," is expected to testify about the approximate date and time that Kumar reformatted the PC and about the effect that procedure would have had on data stored on the system.

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FRANK HAYES • FRANKLY SPEAKING

IT On Target

IN THE EARLY 1940s, J. Presper Eckert was the designer and chief engineer building ENIAC, the first general-purpose all-electronic computer (see story, page 18). It was a huge undertaking; ENIAC was the largest electronic device that had ever been built. So why did Eckert — on a tight schedule and with a limited staff — take time out to feed electrical wire to mice?

Because he knew that ENIAC's hundreds of miles of wiring would be chewed by the rodents. So he used a cageful of mice to taste-test wire samples. The wire whose insulation the mice chewed on least was the stuff Eckert's team used to wire up ENIAC.

It was an elegant solution to an unavoidable problem.

ENIAC was officially unveiled 60 years ago this month. These days, IT people don't usually worry much about mice chewing on the wiring. We've got other unavoidable problems, like how to keep costs down, run development projects with limited resources and match up commodity hardware and off-the-shelf software with the business needs of our users. We've certainly come a long way from Eckert and his mouse cage, haven't we?

Or maybe not. After all, Eckert's budget for the most complicated IT project up to that time was less than $500,000 — that's $5.5 million in today's dollars. He had just a dozen technicians working on ENIAC — there was a war on, after all. And they were using commodity wire and off-the-shelf vacuum tubes to build a system that experts said would never work.

But Eckert had an advantage over most people in modern IT shops. He understood exactly what ENIAC was intended to be used for: calculating trajectory tables for shooting artillery at the enemy. Keeping ENIAC's wiring unchewed was critical to making that possible.

How many IT people today really understand what *our* systems are for?

Some of us just aren't interested. We want to write elegant code, or maximize network throughput, or optimize server utilization. We don't care what the business does or how it does it. We're pure techies, that's all.

Many of us do care about the business processes we automate. We're focused on pushing costs down, keeping users happy and getting business done.

But that's not quite as sharp as Eckert's shooting-artillery-at-the-enemy focus, is it?

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How many people in your IT shop understand what gives your company a competitive advantage? That comes down to products, people and processes — what your company sells, who makes and sells it, and how it's made and sold. Anything that contributes specifically to getting customers to buy from your company instead of a competitor is a competitive advantage. Anything else, well, isn't.

That's what our systems are supposed to be for: to support our ability to compete. We're not cranking out trajectory tables. But the goal is still to hit the target.

If we know what our purpose is, we can spot what's important and what's frivolous. We can understand when customer service people inconveniently tell us they need faster response times, or sales guys ask for a hard-to-build custom credit-check calculation. Those are *our* unavoidable problems — the ones that demand elegant solutions from us.

And we can safely assume that customizable color schemes for a back-office application aren't such a high priority.

Can your whole IT shop get that kind of clarity? Maybe not. Some techies won't want to. Others simply may not get it.

But tell them about it anyway. For those who understand, it will explain the otherwise inexplicable, unreasonable, apparently meaningless demands that users sometimes make. It may even spur them to find ingenious new ways to increase the real value your IT shop delivers to the business — though presumably short of feeding wire to mice.

And if not, at least it'll give them something to chew on. ▸

Unclear on the Concept

End users don't want to show up for a testing session to kick the tires of a new release of the company's enterprise application, reports a pilot fish on the scene. Chief operating officer sends out an e-mail asking all the no-shows why they weren't there. Response from one end user: "I didn't want to come because last time I tested the software, there were too many errors!"

SHARK TANK

Unplugged

IT manager pilot fish is called to a user's office because a real-time data feed isn't updating. The user is out of town, but others use his screen to follow operating trends. Why is the network cable unplugged? fish asks. Manager across the hall explains that he unplugged the "e-mail cable" so a visitor could read his mail – and didn't plug it back in because the visitor might be back tomorrow. "I said the 'e-mail cable' is actually the network cable," says fish, "and it would be a good idea to keep it plugged in all the time."

Unconnected

User stops support pilot fish in the hall and says, "My laptop won't connect to the Internet at home anymore." Fish: Did we configure the laptop for wireless? User: "I don't know." Who is your ISP? "I don't know." Did you set up your own wireless system at home? "I don't know." Hmm, thinks fish, then asks, "Did someone close by move recently?" User: "Yes, my upstairs neighbor." Fish: "I think it's time to move."

Unmoved

Attorney calls support pilot fish to his office to "adjust my keyboard." Lawyer is on the phone when fish arrives, so fish hits a few keys, but the keyboard seems fine. "He hung up and said the keyboard needed to be squared with the edge of his desk," fish reports. "'Excuse me?' I asked. 'Can't you move your own keyboard?' He explained in a loud voice peppered with expletives that he killed at $500 an hour and he didn't have time to move a keyboard! I moved the keyboard."

Unclued

This company is skilling to using e-mail addresses for user log-in names. The new format is firstname.lastname@companyname.com, says a support pilot fish. But so there won't be any confusion, the memo about the change includes an example: jill.employee@ourcompany.com. Then fish gets a user's question: "Hi, if my e-mail is rita.employee@ourcompany.com, what about those of us who share a first name with several people (Jennifer, Steve, Kim, etc.)?"

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Warren counts on the managed IP services of the new AT&T to securely and instantly connect his company to designers, suppliers and buyers all over the world.

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